PATTERNS IN ENVIRONMENTAL SECURITY COURSE OFFERINGS ACROSS HOMELAND SECURITY STUDIES PROGRAMS AT U.S. UNIVERSITIES AND COLLEGES

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ABSTRACT

Homeland security studies is an evolving multidisciplinary field within U.S. higher education. Meta-focusing events, such as the September 11, 2001, attacks, led to the country's focus on terrorism relative to disasters caused by natural hazards and technological accidents. This study sought and identified the extent to which homeland security programs included environmental studies in their curricula and the need for such programs. A mere four percent of homeland security programs explicitly include environmental security. The implications for homeland security as a field of practice and academic discipline are profound. The study found that environmental security is a vital component of homeland security and should be integrated into the curricula.

Keywords: homeland security studies, environmental security, environment-security nexus, climate change, climate literacy

INTRODUCTION

In 2021, the U.S. Department of Homeland Security (DHS) released its Climate Action Plan (CAP) as part of President Biden's administration's whole-of-government efforts to tackle climate change (Department of Homeland Security [DHS], 2021b). CAP found that "extreme weather, intensified by the effects of climate change, is expected to cost the United States approximately 100,000 jobs and $15 billion in GDP by 2025" (DHS, 2021a, p. 10). Climate change is already impacting health, migration, agriculture, water, energy, and other critical infrastructure sectors within the U.S. context (U.S. Global Change Research Program [GCRP], 2018). To counter climate change and its impacts, DHS's CAP identifies increasing climate literacy by developing and implementing a DHS-wide climate education plan to raise awareness among DHS employees regarding climate change and climate action as a priority (DHS, 2021b). The CAP also identifies four priority areas, including incorporating climate adaptation planning and processes into homeland security mission areas, ensuring climate-resilient facilities and infrastructure, incorporating climate adaptation into national preparedness and community grants and projects, and ensuring climate-ready services and supplies (DHS, 2021a).

The environment-security nexus has been an area of research interest for many scholars in various fields of inquiry within the social sciences, including international relations, political science, and security studies (Asaka, 2021a; Floyd & Matthew, 2013; Hough, 2014). This study focuses on the environment-security nexus within the context of homeland security studies. Homeland security studies is rooted in terrorism, and most scholars of homeland security studies

began to pay serious attention to the environment-security nexus in the aftermath of the devastating 2005 Hurricane Katrina (O'Sullivan, 2015; Ramsay & O'Sullivan, 2013).

In this article, "homeland security studies" denotes the growing field of study focused primarily on U.S. domestic security that emerged in response to 9/11 and continues to be shaped by cataclysmic events in the country, including Hurricane Katrina (2005). Homeland security studies is an intrinsically multidisciplinary field covering several knowledge domains, including emergency management, critical infrastructure, resilience, law, policy, strategic planning, decision-making, governance, terrorism, human and environmental security, risk analysis and management, and professionalism, among others (Oliver et al., 2021; O'Sullivan, 2015; Ramsay et al., 2021; Ramsay & Renda-Tanali, 2018).

In light of increasing recognition of the significance of the environment-security nexus within the U.S. context, as evidenced by the Biden administration's efforts to tackle climate change (DHS, 2021a), it is interesting to know whether homeland security studies field has kept pace with the policy front. To this end, this study aims to understand the state of homeland security studies education regarding environmental security course offerings at U.S.-based homeland security studies programs. Considering homeland security studies' terrorism roots, this study seeks to understand patterns in environmental security course offerings across homeland security studies programs at U.S. universities and colleges. Such knowledge can provide much-needed insight into environmental security education within the field, guide future educational directions, and help inform progress toward achieving climate literacy—the fifth priority area of CAP.

The study relies on two sets of data: (1) on existing U.S.-based homeland security studies programs and (2) on courses offered by the identified U.S.-based homeland security studies programs. The former was extracted from the Center for Homeland Defense and Security's (CHDS) database of homeland security studies programs; the latter was extracted from homeland security studies programs' curricula on the websites of the identified homeland security studies programs. Five research questions guided the study:

1. How many undergraduate and graduate homeland security studies programs are there in the United States?
2. What proportion of these programs offer environment-related course(s)?
3. Which homeland security studies programs specifically offer environmental security course(s)?
4. What specific environmental security course(s) are offered by these programs?
5. What are the insights from the study, if any, for homeland security studies field moving forward?

This article begins with a literature review contextualizing the study within existing environmental and homeland security literature. Next, the methods section describes the data sets and the mix-methods analysis. What follows are findings and discussion sections that present and explain the results. Finally, the conclusion and recommendations sections discuss the study's

implications and recommendations for greater inclusion of environmental studies in homeland security theory and practice.

LITERATURE REVIEW

Homeland security studies is a growing and evolving multidisciplinary field of inquiry. Ramsay and O'Sullivan (2013) describe homeland security studies as a dynamic and value-laden complex discipline comprising other dynamic and value-laden complex sub-disciplines. A review of the early literature on the state of homeland security education reveals that a common standard does not govern homeland security studies programs concerning curriculum development (Comiskey, 2015; Kapucu, 2011; McCreight, 2009; Moore et al., 2010; Palin, 2010; Polson et al., 2010; Ramsay, 2013). While corroborating early literature's findings on the state of homeland security education, more recent literature suggests a set of core knowledge domains to guide homeland security studies programs regarding curriculum development (Feldmann-Jensen et al., 2017; Ramsay & Renda-Tanali, 2018). The lack of a common standard means there is inherent diversity in terms of what institutions of higher learning deem homeland security studies. As a result, homeland security studies programs differ from one institution to the other (Ramsay et al., 2021; Ramsay & Renda-Tanali, 2018).

What Is Environmental Security?

Environmental security is a field of inquiry within security studies that is primarily concerned with understanding the linkage, or lack thereof, between the environment and security (Hough, 2014). The roots of environmental security as a field of study can arguably be traced back to the late 1980s and early 1990s (Floyd & Matthew, 2013). This period was marked by debates around the need for a reconceptualization of security in a post–Cold War world coupled with the elevation of environmental concerns to the global policy arena, particularly regarding the Earth Summit held in Rio de Janeiro in 1992 (Hough, 2014).

Environmental security is a multidisciplinary field of study and consists of multiple dimensions. The literature on environmental security can be grouped into five not-quite-comprehensive and not-so-neatly defined categories. First is literature on the interplay between natural resources, conflict, and peace (Adivilah et al., 2018; Barnet & Adger, 2007; Bassel et al., 2018; Busby, 2018; Dabelko et al., 2013). Second, literature on the interplay between climate change, weather-related disasters, and human security (Butts, 2014; O'Sullivan, 2015). Third, literature on the interplay between climate change and disease emergence and spread (Butterworth et al., 2017; Canyon et al., 2017; Patz & Hatch, 2014). Fourth, literature on the interplay between climate change and terrorism (Asaka, 2021a, 2021b; Nett & Rüttinger, 2016; Telford, 2020). Finally, literature on the interplay between climate change and migration (Kaenzig & Piguet, 2014). Thus, it is evident from the preceding discussion that environmental security and homeland security are linked through various pathways, including terrorism, weather extremes, pandemics, and migration.

Environmental Security as a Knowledge Domain of Homeland Security Studies

Over the past decade, there has been a growing number of scholars making a case for mainstreaming environmental security into homeland security studies (Butts, 2014; Comiskey & Larrañaga, 2019; Lanicci et al., 2017; O'Sullivan, 2015; O'Sullivan & Emmelhaiz, 2014; Ramsay & Butts, 2014; Ramsay & O'Sullivan, 2013; Ramsay & Renda-Tanali, 2018). These scholars' work has contributed to centering environmental security within homeland security studies scholarship. However, at this juncture, a gap in the literature exists regarding the state of environmental security education within homeland security studies programs. Currently, no assessment of homeland security studies' education programs provides specific insight into the state of environmental security education within the field. Existing studies have generally focused mainly on homeland security education (Comiskey, 2015; Ramsay et al., 2010; Ramsay, 2013; Ramsay & Renda-Tanali, 2018). Inarguably, several homeland security studies scholars continue to contribute to the body of knowledge relating to environmental security issues (Butts, 2014; Comiskey & Larrañaga, 2019; Lanicci et al., 2017; O'Sullivan, 2015; O'Sullivan & Emmelhaiz, 2014; Ramsay & Butts, 2014; Ramsay & O'Sullivan, 2013). This article is the first of its kind to explore environmental security course offerings across homeland security studies programs by analyzing homeland security studies programs' curricula. The data and methods used in the study are described in detail in the next section.

METHODS

Data on U.S.-based homeland security studies programs were sourced from CHDS and respective programs' websites between August and November 2020. CHDS' University and Agency Partnership Program (UAPP) maintains a database of U.S.-based homeland security programs on its website (Center for Homeland Defense and Security [CHDS], 2023). At the time of data collection, the database only contained names and weblinks of 426 programs organized into five datasets: certificate, associate degree, bachelor's degree, master's degree, and doctoral degree programs. This study purposely excluded certificates (including undergraduate and graduate certificate programs) and associate degree programs. Thus, the scope of this study is limited to bachelor's, master's, and doctoral degree programs. The UAPP database was useful in the identification of relevant programs. Once relevant programs were identified, the next step involved finding program curricula. Curricula were extracted from respective institutions' websites offering the identified homeland security studies programs. Program curricula were extracted from college websites and catalog descriptions of homeland security courses. The study employed quantitative content analysis (QCA) and descriptive statistical analysis to make meaning of the data and reveal patterns. QCA is a method for "collecting and organizing information in a standardized format that allows analysts to make inferences about the characteristics and meaning of written and other recorded material" (Chelimsky, 1989, p. 6).

QCA can be done manually (human-coded analysis) or with a computer application, also known as computer-aided text analysis (Neuendorf, 2017). This method of textual data analysis is useful for monitoring trends and identifying patterns (Randolph et al., 2010). QCA took the form of human-coded analysis and involved a review of program curricula and organized them into two

categories: curricula that do not include environment-related courses and curricula that include environment-related courses. Curricula in the latter category were then organized into two sub-categories: curricula that specifically include environmental security courses and curricula that do not include environmental security courses. Last, the individual environmental security courses included in the curricula were organized based on the level of study (i.e., bachelor's, master's, and doctoral levels). Each stage of the QCA was accompanied by descriptive statistical analysis to help show patterns in the data and make meaning of the same. The "main purpose of descriptive statistics is to explore the data and to reduce them to simpler and more understandable terms without distorting or losing much of the available information" (Agresti & Finlay, 1997, p. 4). Excel-aided descriptive statistical analysis. Excel was used to calculate totals and percentages and visualize data patterns. The results of the study are presented in the next section.

FINDINGS AND DISCUSSION

This section presents and discusses the study's findings and is organized into five sub-sections based on the five research questions.

How Many Undergraduate and Graduate Homeland Security Studies Programs Are There in the United States?

A total of 241 homeland security studies programs offering undergraduate and graduate degrees in the United States are identified in the UAPP database. They include 114 bachelor's, 115 master's, and 12 doctoral programs. The following section presents the analysis results of the proportion of programs' curricula that include environment-related courses.

What Proportion of Homeland Security Studies Programs' Curricula Include Environment-Related Courses?

Of the 241 identified homeland security undergraduate and graduate programs, only 18 (approximately 7%) have environment-related courses. The 18 identified programs specifically include seven bachelor's (approximately 39%), 10 master's (approximately 56%), and one doctoral (approximately 5%) degree program. It is evident from this finding that environment-related courses are associated more with graduate education within the context of homeland security studies than undergraduate education. This is an important finding because it shows at what level of study more emphasis is placed on environment-themed education within homeland security studies. Such knowledge is crucial for understanding the kind of education homeland security studies students receive. Table 1 documents the 18 identified programs by level of study.

Table 1.   Homeland security studies programs whose curriculum includes environment-related courses

Level of Study	Name of Program and Institutional Affiliation
Bachelor's	Bachelor of Science in Homeland Security Management at Central Penn College
	Bachelor of Science in Crisis and Disaster Management at University of Central Missouri
	Bachelor of Science in Homeland Security at Northeastern University
	Bachelor of Security Studies in Border and Homeland Security at Angelo State University
	Bachelor of Science in Security Studies at SUNY Empire State College
	Bachelor of Science in Homeland Security at University of New Hampshire
	Bachelor of Science in Environment, Health, Safety and Sustainability at University of Findlay
Master's	Master of Science in Environmental, Safety and Health Management at University of Findlay
	Master of Science in Homeland Security: Law & Policy at the University of Kansas
	Master of Science in International Relations: National Security Affairs Concentration at Troy University
	Master of Arts in Emergency and Disaster Management at American Military University
	Master of Science in Security & Intelligence Studies at Embry-Riddle Aeronautical University
	Master of Arts in Global Security Studies at Johns Hopkins University
	Master of Arts in Disaster Management at Florida International University
	Master of Science in Disaster and Emergency Management at Nova Southeastern University, Florida
	Master of Science in Security Studies at East Carolina University
	Master of Infrastructure Planning and Management at the University of Washington
Doctoral	Science and Technology Studies (Ph.D.) at Virginia Tech Northern Virginia Center

The finding that 93% of undergraduate and graduate homeland security studies programs' curricula do not include environment-related courses is insightful. The finding establishes that most homeland security programs consider the environmental studies area as being outside the ambit of homeland security studies. This is an important revelation because it reveals the state of environment-themed education within the field. However, concerning environmental security specifically, this finding indicates very little. An analysis of the 18 identified program curricula that include environment-related courses is necessary to understand the actual status of environmental security education within homeland security studies. The next section presents the findings of that analysis and shows patterns in environmental security course offerings across homeland security studies programs.

What Proportion of Homeland Security Studies Programs' Curricula Specifically Include an Environmental Security Course?

Of the 18 programs identified in the previous section, ten (approximately 56%) include at least one environmental security course in their curriculum. Broken down by level of study, these findings translate to four bachelor's and six courses at the master's levels, respectively, accounting for 40% and 60% of the ten identified programs curricula that include at least one environmental security course.

Three things are apparent from the preceding as follows. First, not all programs' curricula that include environment-themed courses also include environmental security courses. This is an important finding in this study because it reveals that not all homeland security studies courses about the environment are about environmental security. Second, more curricula include general environment-related courses and specific environmental security courses than those that only have general environment-related course(s). Third, most of the curricula include environmental security courses at the graduate level compared to the undergraduate level. Table 2 lists the 10 identified programs by the level of study.

Table 2. Homeland security studies programs offering environmental security courses

Level of Study	Name of Program and Institutional Affiliation
Bachelor's	Bachelor of Science in Homeland Security Management at Central Penn College
	Bachelor of Science in Crisis and Disaster Management at the University of Central Missouri
	Bachelor of Science in Security Studies at SUNY Empire State College
	Bachelor of Science in Homeland Security at the University of New Hampshire
Master's	Master of Science in International Relations: National Security Affairs Concentration at Troy University
	Master of Arts in Emergency and Disaster Management at American Military University
	Master of Science in Security & Intelligence Studies at Embry-Riddle Aeronautical University
	Master of Arts in Global Security Studies at Johns Hopkins University
	Master of Arts in Disaster Management at Florida International University
	Master of Infrastructure Planning and Management at University of Washington

Looked at from another perspective, this study establishes that most homeland security studies programs do not include environmental security courses in their curriculum. Of the 241 homeland security studies programs' curricula analyzed, 231 do not include an environmental security course: 96% of all homeland security studies programs' curricula do not include an environmental security course.

The preceding revelation is more concerning because existing literature on the relationship between the environment and security is unequivocal that a nexus exists between the two. For instance, climate change is known to exacerbate existing social vulnerability, which is a known

cause/driver of insecurity of various kinds, including terrorism (Adger et al., 2014; Asaka, 2021a; Gemenne et al., 2014; Matthew, 2014), pandemics (including COVID-19) have been linked to human-wildlife interactions (Schoonover et al., 2021), and climate variability has been linked to both the emergence of new diseases and spread of existing diseases to new areas where they did not exist before (Butterworth et al., 2017; Patz & Hatch, 2014; Zhou et al., 2004). These examples highlight the environment-security nexus and show why environmental security is pertinent to homeland security studies.

That said, having identified homeland security academic programs offering environmental security courses, this article's focus now shifts to identifying specific environmental security courses offered. The following section presents the results of the analysis pertaining to the identification of environmental security courses included in homeland security studies programs' curricula.

Which Are the Environmental Security Courses Included in Homeland Security Studies Programs' Curricula?

As established in the previous section, ten homeland security studies programs' curricula include environmental security courses at the bachelor's and master's levels. The analysis found 11 environmental security courses included across the 10 homeland security studies programs' curricula. Four of the 11 identified environmental security courses are included at the bachelor's level, while the other seven are included at the master's level. In essence, this study establishes that environmental security courses tend to be associated more with graduate than undergraduate education within the context of homeland security studies. This is yet another important finding as it sheds light on the anatomy of environmental security education within homeland security studies. Table 3 documents the identified environmental security courses by title and associated program.

Table 3. Environmental security courses included in homeland security studies programs' curricula

Course title	Associated program
HSM350 Environmental Security	Bachelor of Science in Homeland Security Management at Central Penn College
CDM 4215 Environmental Disasters	Bachelor of Science in Crisis and Disaster Management at University of Central Missouri
PAFF 3003 Security Implications of Global Climate Change	Bachelor of Science in Security Studies at SUNY Empire State College
HLS 580 Environmental and Human Security	Bachelor of Science in Homeland Security at University of New Hampshire
Environmental Security, Conflict, and Development IR 6650	Master of Science in International Relations: National Security Affairs Concentration at Troy University
EDMG665 Climate Change Adaption	Master of Arts in Emergency and Disaster Management at American Military University
SIS 655 The Security Implications of Climate Change	Master of Science in Security & Intelligence Studies at Embry-Riddle Aeronautical University
470.773 Energy and Environmental Security	Master of Arts in Global Security Studies at Johns Hopkins University
470.601 Climate Change and National Security	Master of Arts in Global Security Studies at Johns Hopkins University
PHC 6374 Environmental Disasters and Human Health	Master of Arts in Disaster Management at Florida International University
IPM 505: Climate Change & Infrastructure	Master of Infrastructure Planning and Management at the University of Washington

WAYS FORWARD

While homeland security studies experienced significant growth over the past decade, this study establishes that most homeland security programs' curricula do not include environmental security courses. The literature review section has shown that environmental security is pertinent to the homeland security enterprise and its value in higher education. Therefore, the inadequate inclusion of environmental security courses within homeland security studies programs' curricula, as established by this study, has far-reaching implications for homeland security theory and practice (DHS, 2021b; O'Sullivan, 2015; Ramsay et al., 2021; Ramsay & O'Sullivan, 2013; USGCRP, 2018). Of particular concern is the revelation that only 4% of bachelor's and 5% of master's programs offer environmental security courses, with no doctoral program offering any such course(s). Considering that graduates of homeland security studies programs go on to become homeland security studies scholars, homeland security policymakers, and homeland security practitioners, the stakes could not be higher.

Put into context, homeland security graduates with little or no knowledge of the security implications of climate change are more of a security problem than anything else. As policymakers, overlooking climate change as a security issue in the realm of downplaying its influence on other homeland security concerns, such as natural disasters and migration, poses a

national threat. This situation must be addressed sooner rather than later if homeland security programs hope to make a meaningful contribution toward making the United States and its people secure in light of the ever-expanding range of 21st-century security challenges.

The limited interest in environmental security within homeland security studies should also be seen within the broader American social context. Public perception/interest literature establishes that, in the United States, public issues generally tend to go through a life cycle termed the "issue-attention cycle" (Downs, 1972). The cycle plays out in five stages as follows. First, in the early stages, an issue exists but does not capture the attention of a critical public mass. Second, the issue eventually captures the public's attention, and the public's interest in it rises significantly. Third, a significant rise in public interest leads to a greater understanding of the issue, including what it would take to address it. Hence, in this stage, the public becomes aware of the cost of addressing the issue. Fourth, realizing the high cost of addressing the issue leads to a gradual and significant decline in the public's interest in the same. Fifth, the issue that once drew so much public interest becomes relegated to the back burner and stays out of mainstream public discourse. However, the issue-attention cycle does not apply to all public issues (for instance, terrorism continues to remain an issue of considerable public interest), but environmental problems have historically tended to follow the cycle, at least in the U.S. context (Downs, 1972; Kimrey, 2016; Petersen, 2009; Sylves, 2019).

Downs (1972) identifies three characteristics that make an issue a good candidate for the issue-attention cycle: (1) the issue affects a particular minority group more than it does most of the people in society (climate change is a good example of this because it affects millions of people in the United States, but these people are few relative to the total population of the United States. Today, most people in the United States are not directly affected by climate change, making it easy for them to lose interest in the same over time). (2) The suffering associated with the issue results from some societal activities or arrangements from which most people or a powerful few draw significant benefit (for example, climate change is driven by burning fossil fuels, which produce greenhouse gases that cause greenhouse gases changes in the climate system. Americans rely on fossil fuel–dependent automobiles to go to and from work. Moreover, fossil fuels power the U.S. economy, which affords Americans a higher standard of living that few, if any, would be willing to sacrifice). (3) The issue "has no intrinsically exciting qualities—or no longer has them" (Downs, 1972, p.41). Because U.S. mainstream media is dominated by for-profit business entities that are heavily influenced by viewers' interests and ratings, the interest of the American public holds sway. Thus, the U.S. mainstream media will follow suit if an issue produces enough disinterest among the American people. Ultimately, a lack of, or inadequate, media coverage of an issue leads to a sort of out-of-sight, out-of-mind scenario that culminates in the relegation of the issue as has been the case with environmental concerns in the United States (Downs, 1972; Kimrey, 2016; Sylves, 2019).

Therefore, the original and understandable, emphasis on terrorism by most homeland security programs should ultimately be accompanied by a focus on other cross-cutting issues, including climate change. Additional remedial measures for addressing this concern are suggested in the next section on conclusion and recommendations.

CONCLUSION AND RECOMMENDATIONS

This study aimed to understand patterns in environmental security course offerings across homeland security programs at U.S. universities and colleges. The study establishes that a mere four percent of homeland security programs' curricula include environmental security courses. This is a significant finding for at least two reasons. First, the results provides insights into the state of environmental security as a knowledge domain of homeland security studies. No known study looks explicitly at environmental security within the context of homeland security studies.

Second, compared to other courses taught within homeland security curricula, environmental security courses lack national course offerings. By revealing that 96% of homeland security programs do not offer an environmental security course, the study establishes that the field has considerable room for improvement about accounting for the environment security nexus and implications of the totality of the homeland security enterprise. This is especially critical considering existing knowledge on the interplay between global environmental change concerns and security as outlined in the earlier sections of this article.

The article makes a case for mainstreaming environmental security in homeland security studies and provides three recommendations. First, concerned stakeholders should work toward ensuring that all homeland security academic programs offer courses in environmental security. The logical way to address the noted inadequacy in environmental security course offerings is to have homeland security academic programs that do not currently offer such courses to start offering them. All homeland security academic programs should require that their respective introduction to the course syllabus include environmental security topics such as the climate-security nexus. This will contribute toward ensuring that homeland security studies students and graduates are well informed on the range of prevailing security concerns and understand how global factors shape or influence security at home.

Second, connected to the first recommendation is the need for homeland security academic programs to hire faculty who can develop and teach environmental security courses. Suppose the few homeland security academic programs currently offering environmental security courses are doing so because they have faculty who can develop and teach such courses. In that case, it is likely that the other programs are not offering environmental security courses because they lack faculty who can develop and/or teach such courses. It can also be argued that the latter programs' lack of faculty who can teach environmental security courses is an indication that the institutions consider environmental security to be outside the domain of homeland security studies (hopefully, that is not the case). Cognizant of the fact that environmental security is pertinent to homeland security, the article recommends that homeland security academic programs that do not currently have faculty who can develop and/or teach environmental security courses should prioritize hiring such faculty.

Third, those already in the field should work toward building a network of faculty and students interested in environmental security topics. The first two recommendations will ensure that the environmental security mainstreaming project—arguably initiated a little over a decade ago by pioneer homeland security studies scholars such as James Ramsay, Terrence O'Sullivan, and

John Lannici, among others—is implemented widely. However, successful implementation will be largely dependent on collaboration among environmental security scholars in the field. In other words, research collaborations and sharing of best practices with regard to teaching will go a long way in ensuring that environmental security is successfully mainstreamed in homeland security studies.

This study identifited three limitations that might impact future research. First, the inclusion of an environmental security course in a curriculum does not necessarily equate to the course actually being offered. In order to know what course is currently being taught (or has ever been taught), researchers should interview relevant faculty and administrators. Second, the study focused on the cataloging of homeland security curricula. Environmental topics may be embedded in syllabi and miscellaneous programs such as guest speakers and general education requirements. Finally, the study relies on data from UAPP 2020 database and respective programs' websites. Future studies should examine the most rescent homeland security and related programs including general education requirements.

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