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# The Cyber Education Project: Defining Educational Standards for an Emerging Discipline

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# The Cyber Education Project: Defining Educational Standards for an Emerging Discipline

## *Panel Presentation*

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## **INTRODUCTION**

The Cyber Education Project (CEP) is an initiative supported by a diverse group of computing and information professionals representing academic institutions, government and industry, and several professional societies to develop undergraduate curriculum guidelines and a case for accreditation for educational programs in the “Cyber Sciences.” Organized in July 2014, the CEP is currently leveraging a community of interest to inform and move the work forward. This panel discussion will provide a venue for gathering additional input from information system professionals regarding the goals and work products of the CEP.

## **CYBER SCIENCES**

The term “Cyber Sciences” reflects a collection of computing-based disciplines involving technology, people, and processes aligned in a way to enable “assured operations” in the presence of risks and adversaries. It involves the creation, operation, analysis, and testing of secure computer systems (including network and communication systems) as well as the study of how to employ operations, reasonable risk taking, and risk mitigations. The concept of “Cyber Sciences” refers to a broad collection of such programs, and disciplines under this umbrella often also include (in addition to the foundational elements in

computing) aspects of law, policy, human factors, ethics, risk management, and other topics directly related to the success of the activities and operations dependent on such systems, many times in the context of an adversary.

### **GOALS OF THE CEP**

As noted above, the goals of the CEP are two-fold:

1. To define undergraduate curriculum guidelines for the “Cyber Sciences” and;
2. To develop a case for accreditation of the “Cyber sciences,” ultimately resulting in new “Cyber Sciences” accreditation criteria for consideration by ABET to be included in its criteria for accrediting computing programs.

The CEP has been engaged in Activity #1 for nearly 18 months, and has developed a draft of undergraduate curriculum guidelines for the “Cyber Sciences.” These guidelines are being transitioned to a curriculum task force managed by the major professional societies in computing. Activity #2 recently has been initiated with the goal of developing draft accreditation criteria within the next year and that are consistent with the draft curriculum guidelines.

### **PANEL CONTENT**

The panel will focus on a set of key questions, to include the following:

- What are the “Cyber Sciences”?
- What are the various topics/components that make up the “Cyber Sciences”?
- What “cyber” curriculum components should be included from the Information Systems perspective?
- Why should there be a curriculum volume on the “Cyber Sciences”?
- What is the value of developing accreditation criteria for the “Cyber Sciences”?
- What would program criteria for the “Cyber Sciences” look like?