

**Beta Draft – “Cybersecurity” Program Criteria**  
**PROGRAM CRITERIA FOR CYBERSECURITY**  
**AND SIMILARLY NAMED COMPUTING PROGRAMS**

Lead Society: CSAB

These program criteria apply to computing programs using cybersecurity, computer security, cyber operations, information assurance, information security, or similar terms in their titles.

### **3. Student Outcomes**

The student outcomes for cybersecurity programs must include outcomes (6) and (7).

- (6) An ability to apply security principles and practices to the design and implementation of the physical, software, and human component of the system.
- (7) An ability to analyze and evaluate cyber systems with respect to security and maintaining operations in the presence of risks and threats.

### **5. Curriculum**

Students have course work or an equivalent educational experience that includes the fundamentals of cybersecurity:

1. **Cyber Defense**, such as cryptography, data security, network security, information assurance.
2. **Cyber Operations**, such as cyber attack, penetration testing, cyber intelligence, reverse engineering, cryptanalysis.
3. **Digital Forensics**, such as hardware and software forensics, incident response, cybercrime, cyber law enforcement.
4. **Cyber Physical Systems**, such as Supervisory Control and Data Acquisition (SCADA) systems, internet-of-things (IOT), industrial control systems.
5. **Secure Software Development**, such as secure systems design, secure coding, deployability, maintainability, usability of secure information system.
6. **Cyber Ethics**, such as ethical use of information systems, privacy and anonymity, intellectual property rights, professional responsibility, global societal impact of information systems.
7. **Cyber Policy, Governance, and Law**, such as government and institutional cyber policy and practices, regulatory authorities for cyber systems and operations, cyber law.
8. **Cyber Risk Management**, such as cyber resilience, mission assurance, disaster recover, business continuity, security evaluation, cyber economics.
9. **Human Behavioral Relating to Cyber Systems and Operations**, such as social engineering, social networks, user experience, and organizational behavior.

### **6. Faculty**

At least some full-time faculty members, including those responsible for the cybersecurity curriculum development, must hold a terminal degree with a program of study in cybersecurity or a closely related field.