

Cybersecurity for Curriculum Alignment

11. Secure Software

	KSA Description	Knowledge, Skill, or Ability?	Bloom's Taxonomy Level?	Cross-cutting KSAs	Course Number/Name	Learning Outcome
a	Choose the appropriate data structure for modeling a given problem.	Skill	3	Software Development 3f		
b	Implement a divide-and-conquer algorithm for solving a problem.	Skill	3	Software Development 5g		
c	Implement a coherent abstract data type, with loose coupling between components and behaviors.	Skill	3	Software Development 5i		
d	Identify common coding errors that lead to insecure programs (e.g., buffer overflows, memory leaks, malicious code).	Knowledge	3	Software Development 10a		
e	Apply the principles of least privilege, defensive programming, and fail-safe defaults.	Ability	3	Software Development 10d		
f	Write code with logging capabilities.	Skill	2	Software Development 10f		
g	Integrate security in all phases of the software development life cycle (SecDevOps).	Ability	3			
h	Understand web applicatin issues using OWASP	Knowledge	2			
i	Understand basics of securing web apps - SQL Injection and other input validation.	Knowledge	2	Software Development 10h		