

Cybersecurity for Curriculum Alignment

3. Programming/Scripting Fundamentals

	KSA Description	Knowledge, Skill, or Ability?	Bloom's Taxonomy Level?	Cross-cutting KSAs	Course Number/Name	Learning Outcome
a	Understand basic programming constructs and demonstrate fundamental programming skills including the use of variables, loops, conditional branching, and functions.	Skill	3	Software Development 2c, Data Management 1m		
b	Design, implement, test, and debug a program that uses each of the following fundamental programming constructs: basic computation, simple I/O, standard conditional and iterative structures.	Skill	3	Software Development 2d		
c	Write a program that uses file I/O to provide persistence across multiple executions.	Skill	2	Software Development 2g		
d	Describe the concept of recursion and give examples of its use.	Knowledge	1			
e	Understand and apply basic scripting including writing and executing an automation script in Powershell and/or Linux using constructs such as branching and looping	Skill	3			
f	Write programs that use each of the following data structures: arrays, records/structs, strings, linked lists, stacks, queues, sets, and maps.	Skill	3	Software Development 3c		