Networking KSAs for Curriculum Alignment

3. Networking Fundamentals						
	KSA Description	**Knowledge, Skill, or Ability?**	**Bloom's Taxonomy Level?**	**Cross-cutting KSAs**	**Course Number/Name**	**Learning Outcome**
a	Explain DNS traffic.	Knowledge	2	Cybersecurity 2k		
b	Understand OSI model and how it applies to an example.	knowledge	2			
c	Identify the layers of the OSI Model.	Knowledge	2	Cybersecurity 2c		
d	Summarize the responsibilities of each layer of the OSI Model.	Knowledge	2	Cybersecurity 2d		
e	Explain how the OSI Model is applied to Networking.	Knowledge	3	Cybersecurity 2e		
f	Configure IPv4 and *IPv6* classful subnets.	Skill	1	Cybersecurity 2f		
g	Compare public IP addresses and Private IP addresses.	Knowledge	2	Cybersecurity 2g		
h	Identify IPv4 *and IPv6* address network ID (Class A, Class B, Class C).	Knowledge	2	Cybersecurity 2h		
i	Interpret classless network ID (CIDR block notation).	Skill	2	Cybersecurity 2i		
j	Explain domain naming conventions (UNC path, FQDN, host name).	Knowledge	3	Cybersecurity 2l		
k	Compare Network Address Translation and Port Address Translation (NAT vs PAT).	Knowledge	2	Cybersecurity 2n		
l	Draw network diagram.	Skill	3	Cybersecurity 2o		
m	Analyze the output from networking utilities (e.g. Netstat, Tracert, Traceroute, Ping IPConfig, IFConfig).	Ability	3	Cybersecurity 2p		
n	Discuss network software integration (client software (e.g. Windows 10 or Ubuntu) and server software).	Knowledge	3	Cybersecurity 2q		
o	Discuss network hardware integration (workstations, desktop, mobile devices).	Knowledge	2	Cybersecurity 2r		
p	Communicate best practices for troubleshooting networking issues (layers 1-2 at HS level) (7-step model).	Knowledge	3	Cybersecurity 2s		