

Your Annual Job Skills Validation Vote

Fall 2019



The Purpose

- The Business and Industry Leadership Team (BILT) model puts business in a co-leadership role for the technical program.
- The BILT provides direct input into the knowledge, skills, and abilities (KSAs) program graduates will possess 12-36 months into the future.
- This delivers “workforce-ready” graduates.
- An essential element in the BILT model: an annual job skills validation meeting that features a voting format.



The Meeting

- Once a year (out of four total meetings)
- Can be used for any technical program at any size college
- Two elements to the meeting: the discussion and the vote
- Conduct meeting together in real time; no surveys or e-mails – want the discussion
- In person, plus online
- Schedule 4-6 hours (shorter meeting possible only if you present fewer KSAs)



The Meeting

- Start with a pro forma list (not a blank whiteboard) which businesses will be able to change/edit/delete
- Initial, best-guess list of possible KSAs
- Source from:
 - other technical programs (student learning outcomes)
 - national standards
 - select business experts
 - Note: Department of Labor skills databases are not future-facing
- Do not assume you know what employers want – let them tell you



The Meeting

- Tables in a “U” to facilitate BILT discussion is preferred
- KSA pro forma list formatted into a spreadsheet
- Serve lunch, plus provide beverages and snacks
- Rule of thumb: ~50% of your RSVPs will not show – get 20 to say “yes” to get 10 in the room
- Record the meeting for backup
- End meeting promptly on time



The Roles in the Room

- Facilitator – conducts meeting, responsible for effectiveness
 - Program chair, faculty, administrator
 - May not influence discussion or the vote
 - Keeps meeting on schedule (i.e. pulls discussion out of the weeds)
 - Manages dominant personalities, makes sure every voice is heard
 - Helps to be a SME, but not required
- Recorder – enters votes/comments into the KSA spreadsheet



The Roles in the Room

- Minute-taker – helps Recorder take notes on BILT discussions
- BILT subject matter experts – discuss and vote on KSAs
- Faculty subject matter experts
 - Active listeners
 - Do not vote
 - No mention of current curriculum, want to avoid influencing discussion/vote
 - May ask questions, but do not dominate meeting



Starting the Meeting

- Establish ground rules:
 - Cell phones turned off or silent
 - Respect differing opinions
 - While full BILT participation is requested, abstention on certain KSAs is okay (i.e. if BILT member does not feel “expert” enough to vote on an item)



Starting the Meeting

- Explain the BILT model and KSA process:
 - Emphasize the desire to partner with employers by asking them to co-lead the program
 - KSA focus is for entry-level workers in 12-36 months – what will a new worker need to know?
 - Consensus is not the goal of the vote
 - Discuss as needed in addition to the votes – amend the KSA spreadsheet as needed
 - Spreadsheet will average the votes



Starting the Meeting

- Hard copies of the KSA sheet can be distributed in the room or emailed to those calling in
- Do not send the sheet out early – some may do their vote off-line and then see no need to attend in the meeting



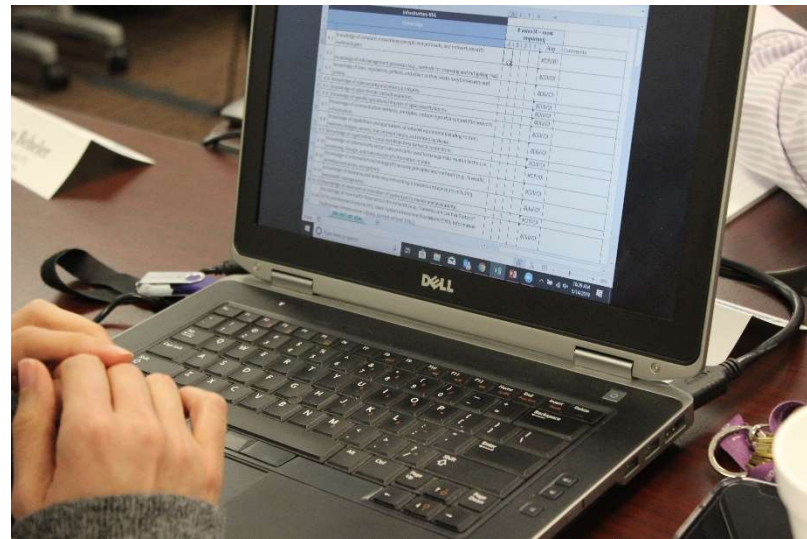
The Discussion and the Vote

- Work through the KSA list line by line
- Discussion and vote
- If you have a long list to work through, rather than one-by-one...
 - ask the BILT to vote on sections at a time
 - tally the votes for the entire section
 - discuss in detail KSAs with divergent votes or KSAs of emerging areas the BILT wants to modify



The Discussion and the Vote

- Recorder tallies votes (and any group revisions to the KSA description) in real-time on spreadsheet
 - BILT members in the room see the spreadsheet projected on wall
 - BILT members participating virtually see the spreadsheet on their computer via screen-share



Infrastructure KSA		# votes (4 = most important)					Comments
		4	3	2	1	Avg	
Knowledge							
K-1	Knowledge of computer networking concepts and protocols, and network security methodologies.	11				4.0	
K-2	Knowledge of risk management processes (e.g., methods for assessing and mitigating risk).		7	1	2	2.5	
K-3	Knowledge of laws, regulations, policies, and ethics as they relate to cybersecurity and privacy. (e.g., PCI, PII, PHI, GDPR)	8	4	1	0	3.5	K33-35 add: examples PCI, PII, PHI, GDPR
K-4	Knowledge of cybersecurity and privacy principles.	7	4	1		3.5	
K-5	Knowledge of cyber threats and vulnerabilities.	3	6			3.1	
K-6	Knowledge of specific operational impacts of cybersecurity lapses.	4	3	2		3.8	
K-7	Knowledge of communication methods, principles, and concepts that support the network infrastructure.	9	1			3.9	
K-8	Knowledge of capabilities and applications of network equipment including routers, switches, bridges, servers, transmission media, and related hardware.	10	1			3.9	
K-9	Knowledge of how to asses existing infrastructure (e.g., LAN, WAN)	5	5	1		3.4	how to asses existing infrastructure (lan, wan)
K-10	Knowledge of risk management, cybersecurity and privacy principles used to manage risks related to the use, processing, storage, and transmission of information or data.	3	9			3.3	add risk management before security
K-11	Knowledge of information technology (IT) security principles and methods (e.g., firewalls, demilitarized zones, encryption).	8	5			3.6	
K-12	Knowledge of local area and wide area networking principles and concepts including bandwidth management.	5	6	1		3.3	
K-13	Knowledge of measures or indicators of system performance and availability.	7	6			3.5	
K-14	Knowledge of how traffic flows across the network (e.g., Transmission Control Protocol [TCP] and Internet Protocol [IP]. Open System Interconnection Model [OSI]).	11		1		3.8	strike ITIL,

Vote tally and average calculated here

Infrastructure KSA		# votes (4 = most important)					Comments
		4	3	2	1	Avg	
Knowledge							
K-1	Knowledge of computer networking concepts and protocols, and network security methodologies.	11				4.0	
K-2	Knowledge of risk management processes (e.g., methods for assessing and mitigating risk).		7	1	2	2.5	
K-3	Knowledge of laws, regulations, policies, and ethics as they relate to cybersecurity and privacy. (e.g., PCI, PII, PHI, GDPR)	8	4	1	0	3.5	K33-35 add: examples PCI, PII, PHI, GDPR
K-4	Knowledge of cybersecurity and privacy principles.	7	4	1		3.5	
K-5	Knowledge of cyber threats and vulnerabilities.	3	6			3.1	
K-6	Knowledge of specific operational impacts of cybersecurity lapses.	4	3	2		3.8	
K-7	Knowledge of communication methods, principles, and concepts that support the network infrastructure.	9	1			3.9	
K-8	Knowledge of capabilities and applications of network equipment including routers, switches, bridges, servers, transmission media, and related hardware.	10	1			3.9	
K-9	Knowledge of how to asses existing infrastructure (e.g., LAN, WAN)	5	5	1		3.4	how to asses existing infrastructure (lan, wan)
K-10	Knowledge of risk management, cybersecurity and privacy principles used to manage risks related to the use, processing, storage, and transmission of information or data.	3	9			3.3	add risk management before security
K-11	Knowledge of information technology (IT) security principles and methods (e.g., firewalls, demilitarized zones, encryption).	8	5			3.6	
K-12	Knowledge of local area and wide area networking principles and concepts including bandwidth management.	5	6	1		3.3	
K-13	Knowledge of measures or indicators of system performance and availability.	7	6			3.5	
K-14	Knowledge of how traffic flows across the network (e.g., Transmission Control Protocol [TCP] and Internet Protocol [IP]. Open System Interconnection Model [OSI]).	11		1		3.8	strike ITIL.

Record of edits/changes to topic

KSA RANKINGS

- 4** The KSA must be included in the curriculum
- 3** The KSA really should be included in the curriculum
- 2** It would be nice for the KSA to be included in the curriculum
- 1** The KSA can be left out of the curriculum entirely

This 1-4 Ranking Criteria 1-4 considers the following together:

- ◆ Importance
- ◆ Level of proficiency
- ◆ Time spent doing the skill
- ◆ Difficulty – how difficult is the skill to learn?



Next Steps

- Faculty meet to discuss the KSA vote results
- Collaboratively determine the cut-off value (usually 3) for KSA getting included in curriculum
- Annotate the KSA sheet – “E” for exposure, “T” for thorough coverage
- Look for gaps
- Make adjustments as needed to ensure KSAs are covered in the curriculum



Infrastructure KSA		# votes (4 = most important)					Comments	Course A	Course B	Course C	Course D
		4	3	2	1	Avg					
Knowledge											
K-1	Knowledge of computer networking concepts and protocols, and network security methodologies.	11				4.0		T	T	T	
K-2	Knowledge of risk management processes (e.g., methods for assessing and mitigating risk).		7	1	2	2.5			T	E	
K-3	Knowledge of laws, regulations, policies, and ethics as they relate to cybersecurity and privacy. (e.g., PCI, PII, PHI, GDPR)	8	4	1	0	3.5	K33-35 add: examples PCI, PII, PHI, GDPR		E		
K-4	Knowledge of cybersecurity and privacy principles.	7	4	1		3.5			T		
K-5	Knowledge of cyber threats and vulnerabilities.	3	6			3.1					
K-6	Knowledge of specific operational impacts of cybersecurity lapses.	4	3	2		3.8			E		
K-7	Knowledge of communication methods, principles, and concepts that support the network infrastructure.	9	1			3.9		T			
K-8	Knowledge of capabilities and applications of network equipment including routers, switches, bridges, servers, transmission media, and related hardware.	10	1			3.9					
K-9	Knowledge of how to asses existing infrastructure (e.g., LAN, WAN)	5	5	1		3.4	how to asses existing infrastructure (lan, wan)		T		
K-10	Knowledge of risk management, cybersecurity and privacy principles used to manage risks related to the use, processing, storage, and transmission of information or data.	3	9			3.3	add risk management before security	E	E	E	
K-11	Knowledge of information technology (IT) security principles and methods (e.g., firewalls, demilitarized zones, encryption).	8	5			3.6			E	T	
K-12	Knowledge of local area and wide area networking principles and concepts including bandwidth management.	5	6	1		3.3					
K-13	Knowledge of measures or indicators of system performance and availability.	7	6			3.5				T	
K-14	Knowledge of how traffic flows across the network (e.g., Transmission Control Protocol [TCP] and Internet Protocol [IP], Open System Interconnection Model [OSI]).	11		1		3.8	strike ITIL,	E	E		
K-15	Knowledge of remote access technology concepts.	6	4	2		3.3		E	E		
K-16	Knowledge of server administration and systems engineering theories, concepts, and methods.	6	5	1		3.4			T	T	E
K-17	Knowledge of telecommunications concepts (will change all the time).	5	3	3	1	3.0	bracets will change all the time		E		

Map skills to courses here (“T” and “E”)

Next Steps

- Report back to the BILT
- Present certificates and degrees affected with KSAs per cert and degree
- Let them know what changes and adjustments were made based on the KSA vote



Sample Certificate - Entry-Level Network Support	Sample KSAs covered: K1, K7, K8, K11, K12, K14 (from first 14)
CPMY 1305 - IT Essentials I: PC Hardware and Software	Provides comprehensive overview of computer hardware and software and an introduction to advanced concepts addressed by CISCO CCENT certification. Lab required.
ITNW 1358 - Network+	Assists individuals in preparing for Computing Technology Industry Association (CompTIA) Network+ certification exam and career as a network professional. Additionally, prepares individuals for a career as a Network Engineer in the Information Technology support industry. Includes the various responsibilities and tasks required for service engineer to successfully perform in a specific environment. Lab required.
ITSY 1300 - Fundamentals of Information Security (Security+)	An introduction to information security including vocabulary and terminology, ethics, the legal environment, and risk management. Identification of exposures and vulnerabilities and appropriate countermeasures are addressed. The importance of appropriate planning, policies and controls is also discussed. Lab required.

Further Resources

- 60-minute “BILT Basics” webinar bit.ly/BILTbasic
- 16-page PDF “Implementing the BILT Model of Business Engagement” bit.ly/BILT-toolkit
- “An Inside Look at the BILT” brochure <http://bit.ly/BILTinside>

- Questions: Ann Beheler, abeheler@collin.edu
 Mark Dempsey, mdempsey@collin.edu



This material is based upon work supported by the National Science Foundation under grant number 1700530. Any opinions, findings and conclusions, or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.



**NATIONAL
CONVERGENCE
TECHNOLOGY CENTER**