

## Software Development KSAs for Curriculum Alignment

4. Development Methods						
	KSA Description	Knowledge, Skill, or Ability?	Bloom's Taxonomy Level?	Cross-cutting KSAs	Course Number/Name	Learning Outcome
a	Trace the execution of a variety of code segments and write summaries of their computations.	Knowledge	2			
b	Explain why the creation of program components with minimal defects is important in the production of high-quality software.	Knowledge	1			
c	Describe the factors that influence performance in a production environment (load, resource intensive tasks, dependencies on external interfaces).	Knowledge	2			
d	Conduct a personal code review (focused on common coding errors) on a program component using a provided checklist.	Skill	3			
e	Contribute to a small-team code review focused on component correctness.	Skill	3			
f	Describe how a contract can be used to specify the behavior of a program component.	Knowledge	2			
g	Refactor a program by identifying opportunities to apply procedural abstraction.	Skill	2			
h	Apply a variety of strategies to the testing and debugging of simple programs.	Ability	4			
i	Construct and debug programs using the standard libraries available within a chosen programming language.	Ability	4			
j	Analyze the extent to which another programmer's code meets documentation and programming style standards.	Ability	4			
k	Apply consistent documentation and program style standards that contribute to the readability and maintainability of software.	Skill	3			