

## Software Development KSAs for Curriculum Alignment

7. Software Construction and Analytics						
	KSA Description	Knowledge, Skill, or Ability?	Bloom's Taxonomy Level?	Cross-cutting KSAs	Course Number/Name	Learning Outcome
a	List the key components of a use-case or similar description of some behavior that is required for a system using the requirements-gathering process.	Knowledge	2			
b	Describe the requirements engineering process to elicit and validate behavioral requirements.	Knowledge	2			
c	Interpret a use-case or similar requirements model for a simple software system.	Skill	2			
d	Identify both functional and non-functional requirements in a given requirements specification for a software system.	Skill	2			
e	Apply key elements and common methods for elicitation and analysis to produce a set of software requirements for a small-sized software system.	Skill	3			
f	Describe the relative advantages and disadvantages among several major process models (e.g., waterfall, iterative, and agile).	Knowledge	1			
g	Describe the different practices that are key components of various process models.	Knowledge	2			
h	Differentiate among the phases of software development and understand associated roles and responsibilities of teammates for each.	Knowledge	2			
i	Execute phases of software development.	Ability	3			
j	Understand how programming in the large differs from individual efforts including a large code base, code reading, builds, context and the documentation of changes.	Knowledge	2			
k	Ability to participate in an agile software development team.	Ability	3			
l	Ability to work on a team; responsibilities of how each role and how they fit together.	Ability	3			
m	Knowledge of the Agile manifesto.	Knowledge	2			
n	Understanding the meaning of minimum viable product.	Knowledge	2			
o	Knowledge of DevOps.	Knowledge	2			