

Data Analytics KSAs for Curriculum Alignment

| 2. Data Storage, Operations, and Administration | | | | | | |
|---|--|-------------------------------|-------------------------|--------------------|--------------------|------------------|
| | KSA Description | Knowledge, Skill, or Ability? | Bloom's Taxonomy Level? | Cross-cutting KSAs | Course Number/Name | Learning Outcome |
| a | Identify and understand key terms and definitions, methods, best practices, operational and maintenance, and both conceptual and technical architectures for data storage, operations, and administration. | Knowledge | 1 | | | |
| b | Understand data storage mechanisms and their impact on data analytics processing | Knowledge | 2 | | | |
| c | Explain the pros and cons of on-premises vs cloud-based analytics solutions. | Knowledge | 2 | Networking 1f | | |
| d | Describe the implications of data architecture on data processing such as data fabric. | Knowledge | 2 | Data Management 1n | | |
| e | Explain the different data organizational schemas (e.g., 1st normal form vs. 3rd normal form vs. Star Schema, etc.) and how they relate to database management systems). | Knowledge | 2 | | | |
| f | Explain the differences between batch analytics and streaming analytics, where each would be applied, and the constraints of each. | Knowledge | 3 | | | |
| g | Properly use and develop a data dictionary for publicly shared data. | Skill | 3 | | | |
| h | Skill: specifically in SQL, R, or another common language. | Skill | 3 | | | |