

## Computerized Software Validation (CSV) Course Syllabus Rev.2

### Day 1

Module	Topics
<b>Session Kick-Off</b>	<ul style="list-style-type: none"> <li>• Introductions</li> <li>• Course objectives and expectations</li> </ul>
<b>Session 1</b>	<ul style="list-style-type: none"> <li>• Examples from Warning Letters Regarding CSV</li> <li>• Detailed review of the 21 CFR part 11 requirements:</li> <li>• Access management</li> <li>• Password management</li> <li>• Electronic Records and Signature (ERES) requirements</li> <li>• Audit trail</li> <li>• Session Q&amp;A</li> </ul>
<b>Session 2</b>	<ul style="list-style-type: none"> <li>• IEC 62304- software requirements overview</li> <li>• Software Design Specification (SDS) and FDA General practice software validation (GPSV) guidance emphasis on what should be tested</li> <li>• EU GMP Annex 11- requirements detailed overview</li> <li>• Emphasis on Audit trail tests+ examples</li> <li>• Audit trail Review</li> </ul>
<b>Session Wrap-Up</b>	<ul style="list-style-type: none"> <li>• Feedback and Session Q&amp;A</li> <li>• Reflection for next session</li> </ul>

### Day 2

Module	Topics
<b>Session Kick-Off</b>	<ul style="list-style-type: none"> <li>• Reflections from last session</li> </ul>
<b>Session 3</b>	<ul style="list-style-type: none"> <li>• Data integrity: ALCOA + definitions and requirements overview</li> <li>• Software Risk Assessment and traceability to software requirements - types of risks related to software that shall be mitigated by software validation</li> <li>• Software Vs Hardware emphasizes</li> <li>• FDA Guidance-Computer-Software-Assurance (CSA)</li> <li>• Critical Thinking &amp; Software Assurance</li> <li>• FDA Validation Paradigm</li> </ul>
<b>Session 4</b>	<ul style="list-style-type: none"> <li>• Software Requirement structure</li> <li>• Commercial Off the Shelf Software (COTS) and Black Box testing</li> <li>• White Box -code test types overview</li> <li>• Session Q&amp;A</li> </ul>
<b>Session Wrap-Up</b>	<ul style="list-style-type: none"> <li>• Feedback and Session Q&amp;A</li> </ul>

## Day 3

### Module

### Topics

#### Session Kick-Off

- Reflections from last session

#### Session 5

- Detailed GAMP5 Software Categories and V shape models
- Examples from CSV IQ, OQ and PQ protocols
- Software Test Types overview
  - Load test
  - Backup and restore
  - Regression Analysis & Testing
  - Negative VS Positive tests
- Deviation Handling and examples
- Spreadsheet (Excel) Validation- what shall be tested?
- Session Q&A

#### Session 6

- IEC 62304- software requirements overview
- Software Design Specification (SDS) and FDA General practice software validation (GPSV) guidance emphasis on what should be tested
- EU GMP Annex 11- requirements detailed overview
- Emphasis on Audit trail tests+ examples
- Audit trail Review

#### Session Wrap-Up

- Feedback and Session Q&A

