CTS-D Prep (Virtual Classroom)

Week 1:

Communicating Design Intent

- AV Design Phases
- Architectural Vocabulary
- Conducting a Needs Analysis
- AV Design Package
- Using a Scale Ruler
- Creating a Program Report
- Reading Architectural Drawings
- Architectural Details

Ergonomics

- Defining Ergonomics
- Human Dimensions
- Furniture Considerations
- Sightline Studies

Visual Principles

- Defining Display Image Size Terms
- Using Analytical and Basic Decision Making
- Using the Web App to Calculate Display Image Size
- Implementing Element Height and Text Size
- Calculating Analytical and Basic Decision Making
- Conforming to DISCAS

The AV Design and Integration Process Assessment
Ergonomics Assessment

Display Image Size

CTS-D Practice Questions 1
Week 2:

**Display Selection**
- Display Sources
- Aspect Ratio
- Display Types
- Front Projection Design
- Rear Projection Design
- Video Wall Design

**Display Environment**
- Measuring Light
- Measuring Projector Brightness
- System Black
- Contrast Ratio
- Predicting Projector Brightness
- Task Light Levels

**Audio Principles**
- The Decibel
- Additional 10Log and 20Log Exercises
- Sound Pressure Level
- Loudspeaker Coverage Patterns
- Ohm’s Law Refresher
- Impedance
- Specify a Power Amplifier (EPR)
- Audio System Quality
- PAG-NAG

**Display Selection Assessment**
**Display Environment Assessment**

**Electrical Considerations**
- Power and Grounding

**Acoustical Criteria**
- Background Noise
- Conservation of Energy
- Reflection
- Reverberation
- Room Modes
- Absorption
- Transmission
Lighting
Lighting Technology

Structural/Mechanical Considerations
Consider This
Codes and Access Issues
Mounting
Designing the Rack
HVAC Issues
Energy Management
Conduit Capacity and Jam Ratio

Audio Principles Assessment
CTS-D Practice Questions 2

Week 3:

Digital Signals
Analog vs. Digital Signals
Digital Signals

Digital Design Considerations
Audio Transport Methods
Video Signal Types
Cable Types
Digital Video Formats
Digital Rights Management

Acoustics Assessment
Jam Ratio and Cable Planning Assessment

Networking
Networking Videos

Streaming
Streaming Needs and Tasks
Streaming and the Network Environment
Streaming Delivery and Protocols
Unicast and Multicast
Security

IT Security for AV Applications
Identify Security Requirements
Risk Registers
Mitigation Plans

Digital Design Considerations Assessment
CTS-D Practice Questions 3

Week 4:

Analog Video Bandwidth

Video Signal Bandwidth
Video System Bandwidth

System Closeout

Reviewing Deliverables
Customer Training
Ongoing Maintenance
Troubleshooting

Networking Assessment
Analog Bandwidth Calculations Assessment
CTS-D Practice Questions 4
CTS-D Practice Exam