This guide shows the various resources which are available year-round to prepare for the ESC-T certification exam, and is focused on online learning and CEDIA books. Where multiple options are available within a domain or task, specific topics are listed. Online courses with the “LES” extension the course code are “lessons” (shorter presentations with one or two learning objectives, often pulled from the larger, more comprehensive eCourses). Additional resources to enhance your learning are shown in the last section. In addition, CEDIA offers “Boot Camp” type training in Indianapolis, and hundreds of instructor-led classes each year at CEDIA expo and other training events. See these course listings at www.cedia.net/train/in-person-training.

KEY TO ABBREVIATIONS:
F-RES = CEDIA FUNDAMENTALS OF RESIDENTIAL ELECTRONIC SYSTEMS, FOLLOWED BY /#, INDICATING CHAPTER NUMBER
A-RES = CEDIA ADVANCED RESIDENTIAL ELECTRONIC SYSTEMS, FOLLOWED BY /#, INDICATING CHAPTER NUMBER
ESPA = ELECTRONIC SYSTEMS PROFESSIONAL ALLIANCE (US) OFFERS BASIC EST TRAINING VIA SCHOOL PROGRAMS, AND BOOKS

### DOMAIN I: GENERAL TECHNICIAN ROLES & RESPONSIBILITIES

<table>
<thead>
<tr>
<th>Task 1: Codes, Safety, Proper Use of Tools</th>
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<td>F-RES/5</td>
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<td>A-RES/8</td>
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<tr>
<td>Safety, codes, standards (US)</td>
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<tr>
<td>ESPA Training</td>
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<tr>
<td><a href="http://www.espa.org">www.espa.org</a></td>
</tr>
<tr>
<td>Basic EST Boot Camp</td>
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<tr>
<td>Asbestos &amp; other threats</td>
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<tr>
<td>EST066 Monsters in the Attic: Unseen Threats of Retrofit Projects</td>
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<td>Jobsite Safety</td>
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<td>White Paper: Safety Tips &amp; Regulations</td>
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<td>Task 2: Professionalism, Communication</td>
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<td>----------------------------------------------------------------</td>
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<tr>
<td>General</td>
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<tr>
<td><strong>Task 3: Project Plans and Documents</strong></td>
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<td>General</td>
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<tr>
<td><strong>Task 4: Math, Electricity, and Industry Terminology</strong></td>
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<td>General</td>
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**DOMAIN II: INFRASTRUCTURE**

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<td><strong>EST105B Cable and Connector Properties</strong>&lt;br&gt;F-RES/6&lt;br&gt;A-RES/2&lt;br&gt;Basic EST Boot Camp&lt;br&gt;TIA-570C&lt;br&gt;NEC 2014&lt;br&gt;CEC 2015</td>
</tr>
<tr>
<td>Network cabling</td>
<td><strong>EST233 Network Cabling Infrastructure</strong>&lt;br&gt;F-RES/6&lt;br&gt;A-RES/2</td>
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</tbody>
</table>
| Cable schedules, drawings | **ESD162 Intro to Design Documents**  
| | F-RES/2  
| | A-RES/15 |
| **Task 2: Trim-out** |  
| **General** | **F-RES/7**  
| | **Basic EST Boot Camp**  
| | **CEA-2030** |
| **DOMAIN III: EQUIPMENT MOUNTING** |  
| **Task 1: Installation in Racks & Cabinets** |  
| **General** | **F-RES/8**  
| | **A-RES/8**  
| | **Home Theater Boot Camp**  
| | **CEA/CEDIA**  
| | **CEB-24** |
| **Task 2: Mounting Components (Cameras, Displays, Projectors, etc.)** |  
| **General** | **EST211 Video Display Technologies for Technicians**  
| | **F-RES/8**  
| | **A-RES/8**  
| | **Home Theater Boot Camp** |
| **Retrofit installation** | **EST308 Retrofit Installation**  
| | **A-RES/3** |
| **Task 3: Installing power management devices** |  
| **General** | **EST304 Power Quality and Conditioning**  
| | **F-RES/18**  
| | **A-RES/8** |
# Domain IV: Audio/Video Systems

## Task 1: Audio Equipment & Systems

| General | EST225 Audio Technologies for Technicians  
F-RES/9  
A-RES/4  
Home Theater Boot Camp |
| Digital audio | EST225LES2 Digital Audio Signals |
| Home theater audio installation | ESD131 Fundamentals of Home Theater Design  
F-RES/12  
A-RES/4  
CEA/CEDIA CEB-22  
Surround Sound Speaker Configuration |
| Distributed audio | ESD211 Fundamentals of Distributed Audio Systems  
F-RES/10  
A-RES/4  
CEA/CEDIA CEB-22 |
| New distributed audio technologies | F-RES/10  
A-RES/4 |
| Surround system calibration | EST325 Audio Setup and Calibration  
EST325LES1 Audio Calibration  
EST326LES1 Audio Calibration Metrics  
A-RES/4 |
| Equalization | EST320LES1 Graphic and Parametric EQ Discussion |
## Task 2: Video Equipment & Systems

| General | EST211 Video Display Technologies for Technicians  
|         | F-RES/11  
|         | A-RES/5  
|         | CEA/CEDIA CEB-23  
| HDMI | EST056LES1 HDMI Introduction  
| Video displays | EST211LES2 Video Display Technologies  
| UltraHD/4K | ESD0034 Understanding UltraHD/4K Technology  
| Video calibration | EST311LES1 Basic Video Calibration  
|         | EST311LES2 Video Calibration Metrics  
| Home theater video installation | ESD131 Fundamentals of Home Theater Design  
|         | F-RES/12  
|         | A-RES/5  
|         | Home Theater Boot Camp  
|         | CEA/CEDIA CEB-23  

## DOMAIN V: COMMUNICATION SYSTEMS

### Task 1: Telephone Equipment & Systems

| General | EST105B Cable and Connector Properties  
|         | F-RES/6  
|         | A-RES/13  

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### Task 2: Network Equipment & Systems

| General | EST233 Network Cabling Infrastructure  
|         | F-RES/6,13  
|         | A-RES/2  
| Network configuration | EST243 IP for Technicians  
|         | A-RES/10,11,12 |

### Task 3: Security/CCTV Equipment & Systems

| General | EST270 Fundamentals of Residential Security Systems  
|         | F-RES/17  
|         | A-RES/13  
| Security system fundamentals | EST270LES1 Security System Basics |

### Task 4: Antenna/Cable/Satellite TV Equipment & Systems

| General | EST105B Cable and Connector Properties  
|         | F-RES/6 |

### DOMAIN VI: INTEGRATED CONTROL SYSTEMS

### Task 1: Control System Devices & Protocols

| General | EST162 Intro to Control & User Interfaces  
|         | F-RES/19,  
|         | A-RES/7 |

### Task 2: Lighting

| General | ESD041.B Lighting Design: The Finishing Touch on a Great Theater Project  
|         | F-RES/14,19  
|         | A-RES/7,13 |
### DOMAIN VII: SYSTEM VERIFICATION & TESTING

#### Task 1: Verification of Compliance with Design
- **Final phase**: F-RES/20
- **Design verification**: [ESD162 Design Documents](#)
  - F-RES/2

#### Task 2: Verification and Testing of System Performance
- **General**: F-RES/20, A-RES/2
  - Basic EST Boot Camp
- **Troubleshooting**: [EST306 Troubleshooting, Repair and Preventive Maintenance](#)
  - A-RES/3

### DIG DEEPER

*You may wish to explore some topics in more detail in order to gain more advanced knowledge, or prepare for additional certifications. Shown here are some additional resources which might interest you.*

<table>
<thead>
<tr>
<th>Topic</th>
<th>Additional Resources</th>
</tr>
</thead>
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<tr>
<td>The Design Process</td>
<td><a href="#">ESD161 Design Thinking &amp; Client Discovery</a></td>
</tr>
<tr>
<td>Design Documents</td>
<td><a href="#">Webinar: The Future of Design Documents</a></td>
</tr>
<tr>
<td>Installation Checklist</td>
<td>Document: Residential Electronic Systems - Common Errors Checklist</td>
</tr>
<tr>
<td>Twisted Pair Specs</td>
<td><a href="#">Document: UTP/STP Application Requirements</a></td>
</tr>
</tbody>
</table>
| Communication Cabling Standards | Document: TIA570 Highlights  
Document: TIA/EIA568 A/B Wiring Charts for RH45  
Document: TIA568C Copper Cabling Delimitations  
Document: EIA5908 Fiber Color Chart |
<table>
<thead>
<tr>
<th>Topic</th>
<th>Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculation Amplifier Power</td>
<td>Document: How Much Amplifier Power is Needed?</td>
</tr>
<tr>
<td>Thermal Management in Racks</td>
<td>White Paper: Controlling the Temperature Inside Equipment Racks (Middle Atlantic Products)</td>
</tr>
<tr>
<td>Power Management in Racks</td>
<td>White Paper: Integrating Electronic Equipment and Power Into Rack Enclosures (Middle Atlantic Products)</td>
</tr>
<tr>
<td>Cable Management in Racks</td>
<td>White Paper: Cable Management (Middle Atlantic Products)</td>
</tr>
<tr>
<td>A/V Bridging</td>
<td>Webinar: Understanding Audio Video Bridging</td>
</tr>
<tr>
<td>Amplifier Specs</td>
<td>EST225LES1 Amplifier Specificationsles</td>
</tr>
<tr>
<td>Calculating Screen Size</td>
<td>White Paper: Selecting Display Size Based on Room Size and Seating</td>
</tr>
<tr>
<td>Home Theater Room Construction</td>
<td>ESD232 Home Theater Room Design</td>
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<tr>
<td>3D TV</td>
<td>EST21ILES1 3D Basics</td>
</tr>
<tr>
<td>Aspect Ratios</td>
<td>EST21ILES3 Aspect Ratios</td>
</tr>
<tr>
<td>UHD/4K</td>
<td>White Paper: UHD/4K</td>
</tr>
<tr>
<td>HDBaseT and HDMI 2.0</td>
<td>Webinar: HDBaseT and UltraHD/4K HDMI 2.0: A Look Into the Standard</td>
</tr>
<tr>
<td>Hacking Into Home Systems</td>
<td>Webinar: Hacking Home Automation</td>
</tr>
<tr>
<td>Near Field Communication</td>
<td>Webinar: Near Field Communication: Gateway to the Intuitive Home</td>
</tr>
<tr>
<td>HDMI 2.1 IN-DEPTH</td>
<td>White Paper: HDMI 2.1 In-Depth</td>
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