



Low Voltage Systems Training Program

The following curriculum outline contains **7 Modules**.

These modules are designed to stand on their own academic merit.

Module I – Introduction to Electricity and Electronics – 32 contact hours

<u>Lesson</u>	<u>Contact hours</u>
201 Fundamentals of Electricity – Current – Voltage – Resistance	4
202 Ohm’s Law, Kirchhoff’s Law; Electrical Measurements and Power	4
203 DC Circuits – Series, Parallel, and Series-Parallel Circuits	4
204 Magnetism, Inductance, and Capacitance	4
205 Alternating Current, AC Measurements, Transformers	4
206 Semiconductors, PN Junctions, Zener Diodes, and Bipolar Transistors	4
207 Power Supplies and Amplifiers	4
208 Review and Test	4



Module II – Fire Alarm Systems – 32 contact hours

<u>Lesson</u>	<u>Contact hours</u>
209 Basic Fire Alarm Systems, Components and Circuits	4
210 Power Supplies, Supplementary Circuits, Types of Controls and Addressable Fire Alarm Systems	4
211 Fire Alarm Initiating Devices	4
212 Fire Alarm Notification Appliances	4
213 Installation Instructions for Fire Alarm Systems	4
214 Fire Alarm System Startup and Acceptance	4
215 Proper Maintenance for Fire Alarm Systems	4
216 Review and Test	4



Module III – Nurse Call Systems – 12 contact hours

<u>Lesson</u>	<u>Contact hours</u>
217 Nurse Call Configurations, Power and Standards	4
218 Nurse Call System Installation and Systems Integration	4
219 Review and Test	4



Module IV – Security Systems – 20 contact hours

<u>Lesson</u>	<u>Contact hours</u>
220 Security System Design and Sensors	4
221 Alarm Assessment and Communication / Entry Control	4
222 Video Security Systems Installation and Signal Quality	4
223 Introduction to Access Control Systems	4
224 Review and Test	4



Module V – Audio and Sound Systems – 20 contact hours

<u>Lesson</u>	<u>Contact hours</u>
225 Technical Fundamentals	4
226 Audio Systems Elements	4
227 Loudspeaker and Microphones	4
228 Labs for installation of Loudspeakers and Audio Systems	4
229 Review and Test	4



Module VI – Broadband Networks – 16 contact hours

<u>Lesson</u>	<u>Contact hours</u>
230 Technical Fundamentals	4
231 Headend Equipment and Cabling	4
232 Network Design and Signal Quality	4
233 Review and Test	4



Module VII – Building Automation – 16 contact hours

<u>Lesson</u>	<u>Contact hours</u>
234 Introduction to Building Automation Systems Components and Electrical System Installation Guidelines	4
235 Electrical Wiring Guidelines and Communications Network Wiring Guidelines	4
236 Documentation and System Commissioning	4
237 Review and Test	4