

Cost Effectiveness Analysis Report

Avionics System

For each Learning Objective, compares the time needed to acquire the knowledge/skills as well as the cost-effectiveness rating of recommended media to current delivery option.

| Learning Objective | Current | | | Recommended | | |
|--|------------|--------------|--------|-------------|--------------|--------|
| | Media | Time [hours] | Rating | Media | Time [hours] | Rating |
| Describe General Safety Practices | Lecture | 1.67 | 62% | CBT 2 | 1.17 | 100% |
| Describe Basic Soldering Function | Lecture | 0.83 | 69% | CBT 1 | 0.58 | 100% |
| Describe the Soldering Process | Lecture | 0.83 | 62% | CBT 2 | 0.58 | 100% |
| Describe the Soldering Iron | Lecture | 0.83 | 72% | Lecture | 0.83 | 72% |
| Conduct Rework and Repair | Lecture | 0.83 | 72% | Lecture | 0.83 | 72% |
| Clean EWIS for Soldering | Lecture | 0.83 | 72% | Lecture | 0.83 | 72% |
| Describe Wire Termination | Lecture | 0.83 | 72% | Lecture | 0.83 | 72% |
| Conduct Wire Termination | Practice | 5 | 58% | Practice | 5 | 58% |
| Describe Handling Procedure of Circuit Boards | Lecture | 0.83 | 67% | Lecture | 0.83 | 67% |
| Describe Circuit Boards Components | Lecture | 1.67 | 72% | Lecture | 1.67 | 72% |
| Configure Circuit Boards | Practice | 6.67 | 58% | Practice | 6.67 | 58% |
| Insulate Aircraft Wires | Practice | 0.83 | 58% | Practice | 0.83 | 58% |
| Describe Electromagnetic Interface | Lecture | 1.67 | 67% | Lecture | 1.67 | 67% |
| Describe Bonding Classes | Lecture | 1.67 | 67% | Lecture | 1.67 | 67% |
| Test Bonds & Grounds | Practice | 0.83 | 58% | Practice | 0.83 | 58% |
| Test Static Wicks | Practice | 0.83 | 58% | Practice | 0.83 | 58% |
| Conduct Static Test Procedure | Practice | 0.83 | 60% | Practice | 0.83 | 60% |
| Identify Various Type of Wires | Lecture | 1.67 | 69% | CBT 1 | 1.17 | 100% |
| Mark Wires | Practice | 0.83 | 62% | CBT 2 | 0.58 | 100% |
| Describe Hardware Maintenance Procedures | Lecture | 1.67 | 62% | CBT 2 | 1.17 | 100% |
| Tie and Lance Wire Bundles | Practice | 2.5 | 58% | Practice | 2.5 | 58% |
| Describe Electronic Connectors | Lecture | 2.5 | 69% | CBT 1 | 1.75 | 100% |
| Front and Rear Release Connector | Practice | 1.67 | 60% | Practice | 1.67 | 60% |
| Describe Radio Frequency Cables | Lecture | 1.67 | 67% | Lecture | 1.67 | 67% |
| Crimp and Attach RF Connectors to Coaxial Cables | Lecture | 0.42 | 62% | CBT 2 | 0.29 | 100% |
| Describe Test Equipment | Lecture | 0.83 | 67% | Lecture | 0.83 | 67% |
| Conduct RF Maintenance Connector Procedure | Practice | 11.67 | 60% | Practice | 11.67 | 60% |
| Lockwire Multiple Connectors Coax Connectors | Practice | 0.83 | 60% | Practice | 0.83 | 60% |
| Shearwire Guarded Switches | Practice | 0.83 | 60% | Practice | 0.83 | 60% |
| Describe Data Busses | Lecture | 0.42 | 69% | CBT 1 | 0.29 | 100% |
| Outline Fault Detection Procedures | Lecture | 0.42 | 69% | CBT 1 | 0.29 | 100% |
| Interpret Technical Drawings | Lecture | 1.67 | 62% | CBT 2 | 1.17 | 100% |
| Trace Signal Flow and Power | Practice | 1.67 | 60% | Practice | 1.67 | 60% |
| Interpret Aircraft Components Location Diagrams | Lecture | 2.5 | 62% | CBT 2 | 1.75 | 100% |
| Conduct Walk Around and Safety Brief | Practice | 0.83 | 60% | Practice | 0.83 | 60% |
| Describe EWIS Troubleshooting Techniques | Lecture | 0.83 | 62% | CBT 2 | 0.58 | 100% |
| Describe EWIS Inspection Techniques | Lecture | 0.83 | 62% | CBT 2 | 0.58 | 100% |
| Describe EWIS Cleaning Techniques | Lecture | 0.83 | 62% | CBT 2 | 0.58 | 100% |
| Describe Corrosion Preventive Compounds | Lecture | 0.83 | 62% | CBT 2 | 0.58 | 100% |
| Apply Corrosion Preventive Compounds | Practice | 2.5 | 60% | Practice | 2.5 | 60% |
| Describe Electrical Power System Components | Lecture | 0.42 | 69% | CBT 1 | 0.29 | 100% |
| Describe Electrical Power System Operations | Lecture | 0.83 | 62% | CBT 2 | 0.58 | 100% |
| Describe Various Aircraft Electrical Power Systems | Lecture | 0.42 | 69% | CBT 1 | 0.29 | 100% |
| Classify Electrical Loads | Lecture | 0.83 | 69% | CBT 1 | 0.58 | 100% |
| Describe Electrical Power System Redundancy | Lecture | 0.83 | 69% | CBT 1 | 0.58 | 100% |
| Describe DC Generators | Lecture | 1.67 | 69% | CBT 1 | 1.17 | 100% |
| Analyze Aircraft AC Generator | Simulation | 3.33 | 60% | Simulation | 3.33 | 60% |
| Describe Auxiliary Power Units Types | Lecture | 0.42 | 69% | CBT 1 | 0.29 | 100% |
| Apply Ground Power to Aircraft | Practice | 1.67 | 60% | Practice | 1.67 | 60% |
| Maintain Aircraft Battery System | Practice | 4.17 | 60% | Practice | 4.17 | 60% |
| Describe Aircraft Power Distribution System | Lecture | 0.83 | 69% | CBT 1 | 0.58 | 100% |
| Describe Distribution System Architecture | Lecture | 0.83 | 69% | CBT 1 | 0.58 | 100% |
| Monitor Load | Lecture | 0.83 | 69% | CBT 2 | 0.58 | 100% |
| Operate Single Engine Aircraft | Simulation | 2.5 | 60% | Simulation | 2.5 | 60% |
| Operate Twin Engine Aircraft | Simulation | 2.5 | 60% | Simulation | 2.5 | 60% |
| Operate Multi-Engine Aircraft | Simulation | 2.5 | 60% | Simulation | 2.5 | 60% |
| Total | | 92.48 | | | 84.45 | |

* **Rating** is a relative measure that indicates which media would provide the best value - when both instructional design requirements and costs are taken into consideration. The media with the highest instructional design rating at lowest cost is assigned a 100% rating. Other media are rated proportionately.