

Crimping, Wire Wrapping and Wire Soldering to ECSS Specifications ECSS-Q-ST-70-26, ECSS-Q-ST-70-30 and ECSS-Q-ST-70-08 (restricted)

Fact Sheet E09 European Space Agency Training Centre (UK)

This ESA-approved course is designed to teach the practical skills and theories associated with crimping & wiring.

The E09 course is based on ECSS specifications: "The Crimping of High-Reliability Electrical Connections" ECSS-Q-ST-70-26, "The Wire Wrapping of High-Reliability Electrical Connections", ECSS-Q-ST-70-30, plus the content of ECSS-Q-ST-70-08 that relates to soldering and wiring to connectors and terminals.

This fully documented course is intended for Production operators, inspectors and operator-inspectors. Engineers from Quality Assurance, Design and Manufacturing also benefit from the course.

The course has practical hands-on experience at every opportunity. All necessary tools and equipment are supplied, although delegates are welcome to bring their own hand tools if they wish.

Course aims

- To review and understand the requirements of the above specifications;
- To identify the factors which influence the quality, reliability and performance of crimped or wire wrapped connections and soldered wiring;
- To develop correct assembly and testing methods;
- To develop ability to identify and analyse associated faults.

Course content

Theory of solderless connection methods *
Knowledge of critical parameters affecting quality and function of connections *
Advantages and disadvantages of compared with soldering * Soldering to wires and terminals* Routing and lacing of wire bundles* chafe prevention*
Tool selection * Tool adjustment and quality control * Processing crimp and wrap surveys *
Recognising range of crimp formats * Correct wire preparation * Correct terminal preparation *
Tensile testing sample connections * The importance of cleanliness * Recognition of faults.

Experience and pre-requisites

- Minimum one year of industrial soldering experience, verified by the employer / manager
- Familiarity with electronic wiring and assembly processes
- Good practical skills
- A positive attitude to high quality workmanship
- A visual acuity certificate according to
- ESA-STR-258.

Duration, schedule and fees

5 days – see the current Course Calendar for dates and fees.

Award

In accordance with ESA-STR-258, an ESA approved, Category 3, Category 2 or Category 2 & 3 Certificate, valid for 2 years, will be awarded on successful completion of all elements of the course.

Recertification

To renew certification for a further 2 years, a 3-day recertification course is available, E99.

Course content, duration, dates and venue are negotiable to meet the special requirements of small groups of delegates from individual clients. This course can be combined with other short courses to create an integrated, cost effective training package.

Enquiries are welcome – please use the website [contact form](#) for security.

