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## Lead-free Assembly Course – Conventional and Virtual Training Course for SMEs

One of the main deliverables of the LEADOUT Project is the production of training courses covering the different technical aspects of the lead-free soldering process focused on SMEs requirements. It was developed two formats of training courses, conventional based on PowerPoint Presentations and one other, applied for e-learning using the LEADOUT website and an e-learning platform for on-line training.

The specific objectives of the *Lead-free Assembly Course* are to give an adequate training in printed circuit board (PCB) manufacturing methods and materials, with a particular focus on lead-free technology. The two modules formats will allow the SMEs to select the most adequate training model to be used in-house accordingly with staff availability and thus offering a more flexible training accordingly with their requirements.

The target groups for the training modules developed are mainly concerned with production engineers and operators.

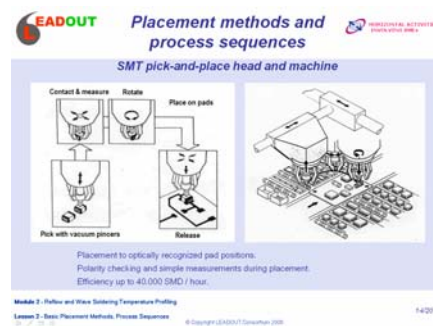
The *Lead-free Assembly Course* contains 5 independent Modules:

- **Module 1** - Solder paste printing and stencil handling
- **Module 2** - Inspection of lead-free joints
- **Module 3** - Lead-free plating finishes
- **Module 4** - Hand soldering and rework
- **Module 5** - Reflow and wave soldering and temperature profiling



### E-learning Format

In the e-learning course at the end of each lesson there is an assessment questionnaire. For an user to continue to the following lesson a defined score has to be reached otherwise the user has to repeat the lesson. This minimum score is not always the same nor directly dependent of the number and type of questions. At the e-learning platform is also available a course report in which a user can easily check his progress on the course and achieved results.



### Conventional Format

If you are interested in further information or you have any question about the LEADOUT Training Courses, do not hesitate to contact Marta Freitas at [mafreitas@isq.pt](mailto:mafreitas@isq.pt).

For further information about the LEADOUT project please visit the website at [www.leadoutproject.com](http://www.leadoutproject.com).