



# Training Catalogue

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Electronic Industries

## Flying Probe and 3030 Testers

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[Learning path](#)



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# Training Overview



Multi Company Class

Face-to-face multi company class training at SPEA site. Join the class scheduled on calendar.



Learning path

The learning path are studied to build an Engineer with solid base of work experience made along side the Expert.



Single Company Class

Face-to-face single company class training at SPEA or customer site. An expert dedicated for your training.



Single Training

Choose the proper training accordingly the learning specialization needed for your daily job.



Virtual Class

Scheduled learning webinar leads by an expert teacher. Attend the class wherever you want.



Work Experience

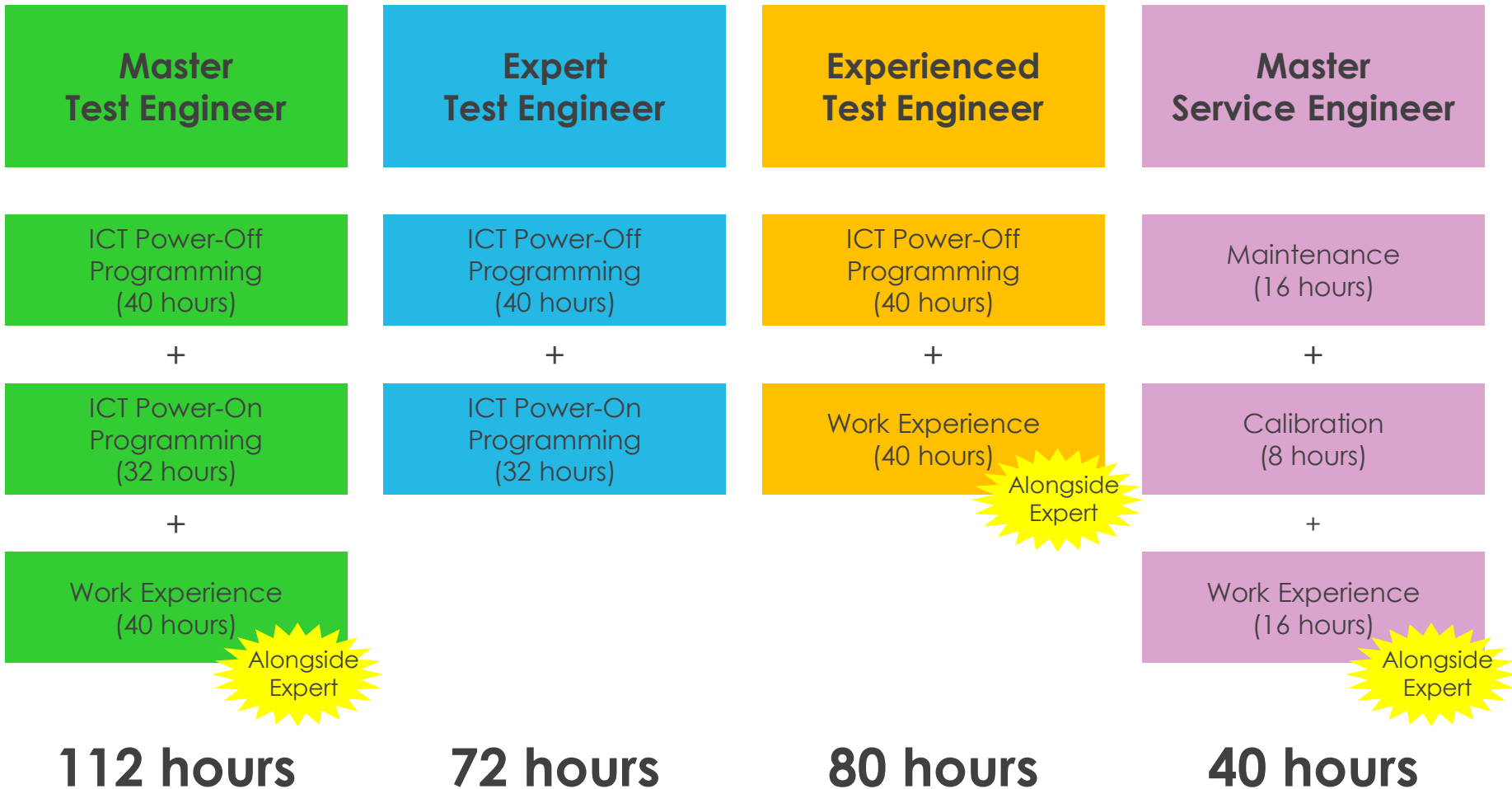
All training include +80% of practical exercises. The Work Experience it's an extra-job made by your own alongside the expert.



Digital Learning

On-demand contents allow you to enjoy the course wherever and whenever you want.

# Flying Probe Learning Path





**Experienced  
Test Engineer**

ICT Power-Off  
Programming  
(40 hours)

+

Work Experience  
(40 hours)



**80 hours**

**Master  
Service Engineer**

Maintenance  
(16 hours)

+

Calibration  
(8 hours)

+

Work Experience  
(16 hours)



**40 hours**

# How Works the Multi Company Calendar ?



Every week  
1 training  
its organized \*



Multi Company Class  
its closed when  
5 people are reached



Mail to  
[academy@spea.com](mailto:academy@spea.com)  
to book your class

FULL Class	FULL Class	OnGoing Class	FREE Class	FREE Class
WK2	WK3	WK4	...	WK51
2018 **				

\* Calendar may affected by National holidays

\*\* Organization example



# For Programmer



## Flying Probe ICT Programming Engineer Training

TPE 201  
40 hours (5dd) | Multi Company | [Details](#)

TPE 202  
40 hours (5dd) | Single Company | [Details](#)

TPE 210  
32 hours (4dd) | Single Company | [Details](#)

For beginner test engineer who needs to develop In-circuit power-off test program.

## Flying Probe Power-On ICT Programming Engineer Training

TPE 208 | 32 hours (4dd) | [Details](#)

For experienced test engineer able to develop In-circuit power-off test program who needs to develop In-circuit power-on test program.

## Flying Probe ICT Programming New OS Migration Training

TPE 206 | 24 hours (3dd) | [Details](#)

Compact training for expert test engineer already able to develop In-circuit power-off test program on SPEA's Flying Probe who needs develop/migrate ATE's test program on the new machine.

## Flying Probe Reverse Engineering Training

TPE 204 | 16 hours (2dd) | [Details](#)

For experienced test engineer able to develop In-circuit power-off test program who needs to learn ways of product testing where CAD data is missing. For experienced test engineer who want to perform the reverse engineering of a board.



## Flying Probe Production Operator Training

TUE 201  
16 hours (2dd) | Multi Company | [Details](#)

TUE 202  
16 hours (2dd) | Single Company | [Details](#)

For operator who needs to use test program for production purpose developed from Test Engineers.





## Flying Probe Maintenance Engineer Training

TME 201  
16 hours (2dd) | Multi Company | [Details](#)

TME 202  
16 hours (2dd) | Single Company | [Details](#)

For service engineer who needs to perform ATE's preventive maintenance.

## Flying Probe Calibration Engineer Training

TME 204 | 8 hours (1dd) | [Details](#)

For service engineer who needs to perform preventive ATE's instrument calibration.



# For Programmer



## 3030 ICT Programming Engineer Training

TPE 101  
40 hours (5dd) | Multi Company | [Details](#)

TPE 102  
40 hours (5dd) | Single Company | [Details](#)

For beginner test engineer who needs to develop In-circuit power-off test program.

## 3030 Functional Programming Engineer Training

TPE 104 | 32 hours (4dd) | [Details](#)

For expert test engineer who needs of the basis knowledge to develop and use functional test program.



# For Operator



## 3030 Production Operator Training

TUE 101  
16 hours (2dd) | Multi Company | [Details](#)

TUE 202  
16 hours (2dd) | Single Company | [Details](#)

For operator who needs to use test program for production purpose.



# For Maintainer



## 3030 Maintenance Engineer Training

TME 101  
16 hours (2dd) | Multi Company | [Details](#)

TME 102  
16 hours (2dd) | Single Company | [Details](#)

For service engineer who needs to perform ATE's preventive maintenance.

## 3030-IL Maintenance Engineer Training

TME 106 | 16 hours (2dd) | [Details](#)

For service engineer who needs to perform preventive ATE's In-Line receiver maintenance.

## 3030 Calibration Engineer Training

TME 104 | 8 hours (1dd) | [Details](#)

For service engineer who needs to perform preventive ATE's instruments calibration.

# Flying Probe Training





Beginner  
Level



40 hours  
(5 days)



8:30-12:30  
13:30-17:30



SPEA site



Multi  
company



## TARGET AUDIENCE

For beginner test engineer who needs to develop In-circuit power-off test program.



## CONTENTS

TE-01 - In-Circuit Power Off.  
TE-02 - Optical Test.  
TE-04 - Laser Test.  
TE-05 - Light Test.  
TE-06 - Open Pin Electroscan Test.  
PO-01 - Production Operations.  
Practical exercise on customer product.



## PREREQUISITES

Electronics.



## GOAL

Generate and debug Ict-Off test program starting from input files (CAD, BOM and Schematics) for: passive components, discrete components, shorts, junction scan test, optical test\*, laser test\*, light test\*, electroscan test\*.  
Use the test program and/or fixture equipment on production environment for board testing, fail identification, and small changes to perform production startup. Run basic diagnostic of the ATE and fault understanding.

NOTE: the training contents may change according ATE configuration\*.



Beginner  
Level



40 hours  
(5 days)



8:30-12:30  
13:30-17:30



SPEA or  
Customer site



Single  
company



## TARGET AUDIENCE

For beginner test engineer who needs to develop In-circuit power-off test program.



## CONTENTS

TE-01 - In-Circuit Power Off.  
TE-02 - Optical Test.  
TE-04 - Laser Test.  
TE-05 - Light Test.  
TE-06 - Open Pin Electroscan Test.  
PO-01 - Production Operations.  
Practical exercise on customer product.



## PREREQUISITES

Electronics.



## GOAL

Generate and debug Ict-Off test program starting from input files (CAD, BOM and Schematics) for: passive components, discrete components, shorts, junction scan test, optical test\*, laser test\*, light test\*, electroscan test\*.  
Use the test program and/or fixture equipment on production environment for board testing, fail identification, and small changes to perform production startup. Run basic diagnostic of the ATE and fault understanding.

NOTE: the training contents may change according ATE configuration\*.

# TPE 210 - Flying Probe ICT Programming Engineer Training



Beginner  
Level



32 hours  
(4 days)



8:30-12:30  
13:30-17:30



SPEA or  
Customer site



Single  
company



## TARGET AUDIENCE

For beginner test engineer who needs to develop In-circuit power-off test program.



## CONTENTS

TE-01 - In-Circuit Power Off.  
TE-02 - Optical Test.  
TE-04 - Laser Test.  
TE-05 - Light Test.  
TE-06 - Open Pin Electroscan Test.  
PO-01 - Production Operations.



## PREREQUISITES

Electronics.



## GOAL

Generate and debug Ict-Off test program starting from input files (CAD, BOM and Schematics) for: passive components, discrete components, shorts, junction scan test, optical test\*, laser test\*, light test\*, electroscan test\*.  
Use the test program and/or fixture equipment on production environment for board testing, fail identification, and small changes to perform production startup. Run basic diagnostic of the ATE and fault understanding.

NOTE: the training contents may change according ATE configuration\*.





Expert  
Level



32 hours  
(4 days)



8:30-12:30  
13:30-17:30



SPEA or  
Customer site



Single  
company



## TARGET AUDIENCE

For experienced test engineer able to develop In-circuit power-off test program who needs to develop In-circuit power-on test program.



## CONTENTS

TE-07 - Power Supply Test.  
TE-08 - In-Circuit Power On.  
TE-13 - Smart On-Board Programming.  
TE-25 - Cable Design.



## PREREQUISITES

Electronics.  
Flying Probe ICT Programming Engineer Training.



## GOAL

Generate and debug Power Supply test program starting from input files (CAD, BOM and Schematics) such as: voltage test, current test, voltage regulator test.  
Generate and debug Ict-On test program starting from input files (CAD, BOM and Schematics) for: Op-Amp, Comparator, Analog Ic, Digital Ic (logic functions), Oscillator.  
Generate and debug test program for IC programming through the Smart Obp development environment.  
Get basis abilities of electrical cable design to assign fixed resources, such as channels or power supply to increase the performance of the test program.

NOTE: the training contents may change according ATE configuration.



Expert  
Level



24 hours  
(3 days)



8:30-12:30  
13:30-17:30



SPEA or  
Customer site



Single  
company



## TARGET AUDIENCE

Compact training for expert test engineer already able to develop In-circuit power-off test program on SPEA's Flying Probe who needs develop/migrate ATE's test program on the new machine.



## CONTENTS

TE-01 - In-Circuit Power Off  
TE-02 - Optical Test  
TE-04 - Laser Test  
TE-05 - Light Test  
TE-06 - Open Pin Electroscan Test  
TE-16 - Test Program Migration



## PREREQUISITES

Electronics.  
SPEA's Flying Probe skilled Test Engineer.



## GOAL

Generate and debug Ict-Off test program starting from input files (CAD, BOM and Schematics) for: passive components, discrete components, shorts, junction scan test, optical test\*, laser test\*, light test\*, electroscan test\*.  
Use tools for migrate the test program developed on the previous or different system generation.

NOTE: the training contents may change according ATE configuration\*.



Expert  
Level



16 hours  
(2 days)



8:30-12:30  
13:30-17:30



SPEA or  
Customer site



Single  
company



## TARGET AUDIENCE

For experienced test engineer able to develop In-circuit power-off test program who needs to learn ways of product testing where CAD data is missing. For experienced test engineer who want to perform the reverse engineering of a board.



## CONTENTS

TE-09 - Board Learn.  
TE-14 - Cad Data Builder.  
TE-15 - Board Data Builder.



## PREREQUISITES

Electronics.  
Flying Probe ICT Programming Engineer Training.



## GOAL

Generate and debug Ict-Off test program without CAD file and based on the component value learning (R-L-C-D-Sho).  
Use tools to get CAD file, BOM and Schematics for reverse engineering purposes.  
Use tools for board data rebuilding (components list, coordinates, net list), when unavailable the CAD file, useful to generate and debug test program.

NOTE: the training contents may change according ATE configuration.



Beginner  
Level



16 hours  
(2 days)



8:30-12:30  
13:30-17:30



SPEA site



Multi  
company



## TARGET AUDIENCE

For operator who needs to use test program for production purpose developed from Test Engineers.



## CONTENTS

PO-01 - Production Operations.



## PREREQUISITES

Electronics.



## GOAL

Use the test program and/or fixture equipment on production environment for board testing, fail identification, and small changes to perform production startup. Run basic diagnostic of the ATE and fault understanding.

NOTE: the training contents may change according ATE configuration.



Beginner  
Level



16 hours  
(2 days)



8:30-12:30  
13:30-17:30



SPEA or  
Customer site



Single  
company



## TARGET AUDIENCE

For operator who needs to use test program for production purpose developed from Test Engineers.



## CONTENTS

PO-01 - Production Operations.



## PREREQUISITES

Electronics.



## GOAL

Use the test program and/or fixture equipment on production environment for board testing, fail identification, and small changes to perform production startup. Run basic diagnostic of the ATE and fault understanding.

NOTE: the training contents may change according ATE configuration.



Beginner  
Level



16 hours  
(2 days)



8:30-12:30  
13:30-17:30



SPEA site



Multi  
company



## TARGET AUDIENCE

For service engineer who needs to perform ATE's preventive maintenance.



## CONTENTS

SE-02 - Maintenance.



## PREREQUISITES

None.



## GOAL

Perform preventive yearly maintenance and diagnostics of the machine.

NOTE: the training contents may change according ATE configuration.



Beginner  
Level



16 hours  
(2 days)



8:30-12:30  
13:30-17:30



SPEA or  
Customer site



Single  
company



## TARGET AUDIENCE

For service engineer who needs to perform ATE's preventive maintenance.



## CONTENTS

SE-02 - Maintenance.



## PREREQUISITES

None.



## GOAL

Perform preventive yearly maintenance and diagnostics of the machine.

NOTE: the training contents may change according ATE configuration.



Beginner  
Level



8 hours  
(1 day)



8:30-12:30  
13:30-17:30



SPEA or  
Customer site



Single  
company



Required tools  
sold separately



## TARGET AUDIENCE

For service engineer who needs to perform preventive ATE's instruments calibration.



## CONTENTS

SE-01 - Calibration.



## PREREQUISITES

None.



## GOAL

Perform ATE's instruments calibration and adjustment such as: Signal Generators, DC generator, AC generator, Measure Unit. Get a calibration report of the measures acquired and adjusted for own purposes.

NOTE: the training contents may change according ATE configuration.







Beginner  
Level



40 hours  
(5 days)



8:30-12:30  
13:30-17:30



SPEA site



Multi  
company



## TARGET AUDIENCE

For beginner test engineer who needs to develop In-circuit power-off test program.



## CONTENTS

TE-01 - In-Circuit Power Off.  
TE-06 - Open Pin Electroscan Test.  
TE-07 - Power Supply Test.  
TE-24 - Electrical Fixture Design.  
PO-01 - Production Operations.



## PREREQUISITES

Electronics.



## GOAL

Generate and debug Ict-Off test program starting from input files (CAD, BOM and Schematics) for: passive components, discrete components, shorts, junction scan test, electroscan test\*.  
Generate and debug Power Supply test program starting from input files (CAD, BOM and Schematics) such as: voltage test, current test, voltage regulator test.  
Get basis abilities of fixture design in term of electrical connections, test points layout, fixture layout, and system resources assignment (i.e. channels and power supply).  
Use the test program and/or fixture equipment on production environment for board testing, fail identification, and small changes to perform production startup. Run basic diagnostic of the ATE and fault understanding.

NOTE: the training contents may change according ATE configuration\*.



Beginner  
Level



40 hours  
(5 days)



8:30-12:30  
13:30-17:30



SPEA or  
Customer site



Single  
company



## TARGET AUDIENCE

For beginner test engineer who needs to develop In-circuit power-off test program.



## CONTENTS

TE-01 - In-Circuit Power Off.  
TE-06 - Open Pin Electroscan Test.  
TE-07 - Power Supply Test.  
TE-24 - Electrical Fixture Design.  
PO-01 - Production Operations.



## PREREQUISITES

Electronics.



## GOAL

Generate and debug Ict-Off test program starting from input files (CAD, BOM and Schematics) for: passive components, discrete components, shorts, junction scan test, electroscan test\*.  
Generate and debug Power Supply test program starting from input files (CAD, BOM and Schematics) such as: voltage test, current test, voltage regulator test.  
Get basis abilities of fixture design in term of electrical connections, test points layout, fixture layout, and system resources assignment (i.e. channels and power supply).  
Use the test program and/or fixture equipment on production environment for board testing, fail identification, and small changes to perform production startup. Run basic diagnostic of the ATE and fault understanding.

NOTE: the training contents may change according ATE configuration\*.



Expert  
Level



32 hours  
(4 days)



8:30-12:30  
13:30-17:30



SPEA or  
Customer site



Single  
company



## TARGET AUDIENCE

For expert test engineer who approach the functional test program development and/or needs to use/maintain the application developed.



## CONTENTS

TE-22 - Functional Test Program  
TE-23 - VRAD Test Program  
TE-24 - Electrical Fixture Design



## PREREQUISITES

Electronics.  
Visual Basic skilled programmer.



## GOAL

Get basis abilities to generate and debug a functional test program through the source code as Visual Basic.  
Get basis abilities to use and maintenance the functional VRAD test program.  
Get basis abilities of fixture design in term of electrical connections, test points layout, fixture layout, and system resources assignment (i.e. channels and power supply).

NOTE: the training contents may change according ATE configuration.



Beginner  
Level



16 hours  
(2 days)



8:30-12:30  
13:30-17:30



SPEA site



Multi  
company



## TARGET AUDIENCE

For operator who needs to use test program for production purpose developed from Test Engineers.



## CONTENTS

PO-01 - Production Operations.



## PREREQUISITES

Electronics.



## GOAL

Use the test program and/or fixture equipment on production environment for board testing, fail identification, and small changes to perform production startup. Run basic diagnostic of the ATE and fault understanding.

NOTE: the training contents may change according ATE configuration.



Beginner  
Level



16 hours  
(2 days)



8:30-12:30  
13:30-17:30



SPEA or  
Customer site



Single  
company



## TARGET AUDIENCE

For operator who needs to use test program for production purpose developed from Test Engineers.



## CONTENTS

PO-01 - Production Operations.



## PREREQUISITES

Electronics.



## GOAL

Use the test program and/or fixture equipment on production environment for board testing, fail identification, and small changes to perform production startup. Run basic diagnostic of the ATE and fault understanding.

NOTE: the training contents may change according ATE configuration.



Beginner  
Level



16 hours  
(2 days)



8:30-12:30  
13:30-17:30



SPEA site



Multi  
company



## TARGET AUDIENCE

For service engineer who needs to perform ATE's preventive maintenance.



## CONTENTS

SE-02 - Maintenance.



## PREREQUISITES

None.



## GOAL

Perform preventive yearly maintenance and diagnostics of the machine.

NOTE: the training contents may change according ATE configuration.



Beginner  
Level



16 hours  
(2 days)



8:30-12:30  
13:30-17:30



SPEA or  
Customer site



Single  
company



## TARGET AUDIENCE

For service engineer who needs to perform ATE's preventive maintenance.



## CONTENTS

SE-02 - Maintenance.



## PREREQUISITES

None.



## GOAL

Perform preventive yearly maintenance and diagnostics of the machine.

NOTE: the training contents may change according ATE configuration.





Beginner  
Level



16 hours  
(2 days)



8:30-12:30  
13:30-17:30



SPEA or  
Customer site



Single  
company



## TARGET AUDIENCE

For service engineer who needs to perform ATE's preventive maintenance.



## CONTENTS

SE-02 - Maintenance.



## PREREQUISITES

None.



## GOAL

Perform preventive yearly maintenance and diagnostics of the machine.

NOTE: the training contents may change according ATE configuration.



Beginner  
Level



8 hours  
(1 days)



8:30-12:30  
13:30-17:30



SPEA or  
Customer site



Single  
company



Required tools  
sold separately



## TARGET AUDIENCE

For service engineer who needs to perform preventive ATE's instruments calibration.



## CONTENTS

SE-01 - Calibration.



## PREREQUISITES

None.



## GOAL

Perform ATE's instruments calibration and adjustment such as: Signal Generators, DC generator, AC generator, Measure Unit. Get a calibration report of the measures acquired and adjusted for own purposes.

NOTE: the training contents may change according ATE configuration.