

# Training Catalogue

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Electronic Industries

## Flying Probe and 3030 testers

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Date: 8.03.2017  
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# Training products for Electronic Industries

Type	Machine	Characteristics	Self learn
E-learning Training	3030 Flying Probe	In-home training Unlimited users and execution Single company Self planning Remote support pack	100% Customer
Open Training	3030 Flying Probe	Spea site Up to 5 participants Multi company Yearly classrom planning	10% Customer
Customized Training	Bed of nails all models Flying Probe all models	On-site or Spea site Up to 4 participants Single company Custom planning Custom duration	10% Customer

# Flying Probe Tester Training #1

	<b>TEST ENGINEER OPEN TRAINING</b>	<b>TEST ENGINEER CUSTOM TRAINING (4 days)</b>	<b>TEST ENGINEER CUSTOM TRAINING (5 days)</b>	<b>TEST ENGINEER CUSTOM TRAINING; UPDATE TO NEW OS</b>	<b>TEST ENGINEER CUSTOM TRAINING; POWER-ON PROGRAMMING</b>	<b>TEST ENGINEER CUSTOM TRAINING; REVERSE ENGINEERING</b>
	Course designed for Test Engineer that needs to create an In-Circuit Off test program starting from input files (CAD, BOM and Schematics) ready to use for production purpose.	Course designed for Test Engineer that needs to create an In-Circuit Off test program starting from input files (CAD, BOM and Schematics) ready to use for production purpose.	Course designed for Test Engineer that needs to create an In-Circuit Off test program starting from input files (CAD, BOM and Schematics) ready to use for production purpose.	Course designed for experienced Test Engineer that needs to create an In-Circuit Off test program starting from input files (CAD, BOM and Schematics) ready to use for production purpose on new development OS platform.	Course designed for Test Engineer that needs to create an In-Circuit On test program starting from input files (CAD, BOM and Schematics) ready to use for production purpose.	Course designed for Test Engineer that needs to create a test program without input files starting from golden board only.
<b>Code</b>	TPE 201	TPE 210	TPE 202	TPE 206	TPE 208	TPE 204
<b>Training Goal</b>	lct-Off test program developer	lct-Off test program developer	lct-Off test program developer	lct-Off test program developer	lct-Off test program developer	lct-Off test program developer without input files
<b>Training Level</b>	Beginner	Beginner	Beginner	Intermediate	Expert	Intermediate
<b>Duration</b>	5 days	4 days	5 days	3 days	4 days	2 days
<b>Multi Company</b>	●					
<b>SPEA Site</b>	●	●	●	●	●	●
<b>On-Site (A)</b>		●	●	●	●	●
<b>Exercise on training kit</b>	●	●	●	●	●	●
<b>Exercise on customer product</b>	●		●			
<b>Requirements</b>	<ul style="list-style-type: none"> <li>Electronic quantities.</li> <li>Components functioning (passive, discrete).</li> </ul>	<ul style="list-style-type: none"> <li>Electronic quantities.</li> <li>Components functioning (passive, discrete).</li> </ul>	<ul style="list-style-type: none"> <li>Electronic quantities.</li> <li>Components functioning (passive, discrete).</li> </ul>	<ul style="list-style-type: none"> <li>Electronic quantities.</li> <li>Components functioning (passive, discrete).</li> <li>Test program In-circuit developer or equivalent skills</li> </ul>	<ul style="list-style-type: none"> <li>Electronic quantities.</li> <li>Components functioning (passive, discrete, analogue and digital).</li> <li>Test Engineer developer or equivalent skills.</li> <li>Datasheets understanding.</li> </ul>	<ul style="list-style-type: none"> <li>Electronic quantities.</li> <li>Components functioning.</li> <li>Test program In-circuit developer or equivalent skills.</li> </ul>
<b>Skills (B)</b>	<ul style="list-style-type: none"> <li>FP-PROG-001B - lct-Off test program.</li> <li>FP-USE-201B - Production operations.</li> </ul>	<ul style="list-style-type: none"> <li>FP-PROG-001B - lct-Off test program.</li> <li>FP-USE-201B - Production operations.</li> </ul>	<ul style="list-style-type: none"> <li>FP-PROG-001B - lct-Off test program.</li> <li>FP-USE-201B - Production operations.</li> </ul>	<ul style="list-style-type: none"> <li>FP-PROG-001B - lct-Off test program.</li> <li>FP-USE-201B - Productions operations.</li> <li>FP-PROG-014B - Test program migration</li> </ul>	<ul style="list-style-type: none"> <li>FP-PROG-011B - lct-On from probes without adapter.</li> <li>FP-PROG-012B - lct-On from probes with adapter.</li> <li>FP-PROG-002B - Smart Obp.</li> </ul>	<ul style="list-style-type: none"> <li>FP-PROG-004B - Leonardo Board Learn.</li> <li>FP-PROG-006B - Leonardo Cad Builder.</li> <li>FP-PROG-009B - Leonardo board data rebuild.</li> </ul>

(A) Journey expenses to be quoted according distance.

(B) The training contents could be affected to the functions configuration available on customer system.

(C) Require specific tools kit which is sold separately.

(D) Customer equipment required (fixture/cable, board, test program).

# Flying Probe Tester Training #2

	<b>PRODUCTION OPERATOR OPEN TRAINING</b>	<b>PRODUCTION OPERATOR CUSTOM TRAINING</b>	<b>MAINTENANCE ENGINEER OPEN TRAINING</b>	<b>MAINTENANCE ENGINEER CUSTOM TRAINING</b>	<b>CALIBRATION ENGINEER CUSTOM TRAINING</b>
	Course designed for Production Operator that needs to use and maintenance the test program already developed for board testing on manufacturing department.	Course designed for Production Operator that needs to use and maintenance the test program already developed for board testing on manufacturing department.	Course designed for Service Engineer that needs to perform preventive/ corrective maintenance, diagnostic, parts identification and replacement of the ATE.	Course designed for Service Engineer that needs to perform preventive/ corrective maintenance, diagnostic, parts identification and replacement of the ATE.	Course designed for Service Engineer that needs to perform electrical calibration/adjustment of Ict instruments. They will also be able to certify by their own the calibration results.
<b>Code</b>	TUE 201	TUE 202	TME 201	TME 202	TME 204
<b>Training Goal</b>	Test program user	Test program user	Service maintainer	Service maintainer	Service maintainer
<b>Training Level</b>	Beginner	Beginner	Intermediate	Intermediate	Intermediate
<b>Duration</b>	2 days	2 days	2 days	2 days	1 day
<b>Multi Company</b>	●		●		
<b>SPEA Site</b>	●	●	●	●	●
<b>On-Site (A)</b>		●		●	●
<b>Exercise on training kit</b>	●	●			(C)
<b>Exercise on customer product</b>		(D)			
<b>Requirements</b>	<ul style="list-style-type: none"> <li>Electronic quantities.</li> <li>Components functioning (passive, discrete).</li> </ul>	<ul style="list-style-type: none"> <li>Electronic quantities.</li> <li>Components functioning (passive, discrete).</li> </ul>	<ul style="list-style-type: none"> <li>Test program user or equivalent skills of the main parts of the system</li> </ul>	<ul style="list-style-type: none"> <li>Test program user or equivalent skills of the main parts of the system</li> </ul>	<ul style="list-style-type: none"> <li>Test program user or equivalent skills of the main parts of the system</li> </ul>
<b>Skills (B)</b>	<ul style="list-style-type: none"> <li>FP-USE-201B - Production operations.</li> </ul>	<ul style="list-style-type: none"> <li>FP-USE-201B - Production operations.</li> </ul>	<ul style="list-style-type: none"> <li>FP-SERV-101B - Electrical maintenance and diagnostic operations.</li> </ul>	<ul style="list-style-type: none"> <li>FP-SERV-101B - Electrical maintenance and diagnostic operations.</li> </ul>	<ul style="list-style-type: none"> <li>FP-SERV-102B - Calibration.</li> </ul>

(A) Journey expenses to be quoted according distance.

(B) The training contents could be affected to the functions configuration available on customer system.

(C) Require specific tools kit which is sold separately.

(D) Customer equipment required (fixture/cable, board, test program).

# 3030 Tester Training # 1

	TEST ENGINEER OPEN TRAINING	TEST ENGINEER CUSTOM TRAINING	FUNCTIONAL TEST ENGINEER CUSTOM TRAINING	PRODUCTION OPERATOR OPEN TRAINING	PRODUCTION OPERATOR CUSTOM TRAINING
	Course designed for Test Engineer that needs to create an In-Circuit Off test program starting from input files (CAD, BOM and Schematics) ready to use for production purpose.	Course designed for Test Engineer that needs to create an In-Circuit Off test program starting from input files (CAD, BOM and Schematics) ready to use for production purpose.	Course designed for skilled Test Engineer that needs to create a functional test program starting from board specifications and through programming language (.NET).	Course designed for Production Operator that needs to use and maintenance the test program already developed for board testing on manufacturing department.	Course designed for Production Operator that needs to use and maintenance the test program already developed for board testing on manufacturing department.
<b>Code</b>	TPE 101	TPE 102	TPE 104	TUE 101	TUE 102
<b>Training Goal</b>	Ict-Off test program developer	Ict-Off test program developer	Functional test program user	Ict-Off test program user	Ict-Off test program user
<b>Training Level</b>	Beginner	Beginner	Expert	Beginner	Beginner
<b>Duration</b>	5 days	5 days	4 days	2 days	2 days
<b>Multi Company</b>	●			●	
<b>SPEA Site</b>	●	●	●	●	●
<b>On-Site (A)</b>		●	●		●
<b>Exercise on training kit</b>	●	●	●	●	●
<b>Exercise on customer product</b>		(D)	(D)		(D)
<b>Requirements</b>	<ul style="list-style-type: none"> <li>Electronic quantities.</li> <li>Components functioning (passive, discrete).</li> </ul>	<ul style="list-style-type: none"> <li>Electronic quantities.</li> <li>Components functioning (passive, discrete).</li> </ul>	<ul style="list-style-type: none"> <li>Electronic quantities.</li> <li>Components functioning (passive, discrete, analogue and digital).</li> <li>Test Engineer developer or equivalent skills.</li> <li>Datasheets understanding.</li> <li>Principles of programming language (Visual Basic).</li> <li>Fixture/cable design knowledge.</li> <li>Functional test knowledge.</li> </ul>	<ul style="list-style-type: none"> <li>Electronic quantities.</li> <li>Components functioning (passive, discrete).</li> </ul>	<ul style="list-style-type: none"> <li>Electronic quantities.</li> <li>Components functioning (passive, discrete).</li> </ul>
<b>Skills (B)</b>	<ul style="list-style-type: none"> <li>BON-PROG-001B - Ict test program.</li> <li>BON-PROG-018B - Fixture design.</li> <li>BON-PROG-201B - Production operations.</li> </ul>	<ul style="list-style-type: none"> <li>BON-PROG-001B - Ict test program.</li> <li>BON-PROG-018B - Fixture design.</li> <li>BON-PROG-201B - Production operations.</li> </ul>	<ul style="list-style-type: none"> <li>BON-PROG-018B - Fixture design</li> <li>BON-PROG-014B - Functional test program.</li> <li>BON-PROG-015B - VRAD test program</li> </ul>	<ul style="list-style-type: none"> <li>BON-USE-201B - Production operations.</li> </ul>	<ul style="list-style-type: none"> <li>BON-USE-201B - Production operations.</li> </ul>

(A) Journey expenses to be quoted according distance.

(B) The training contents could be affected to the functions configuration available on customer system.

(C) Require specific tools kit which is sold separately.

(D) Customer equipment required (fixture/cable, board, test program).

# 3030 Tester Training #2

	<b>MAINTENANCE ENGINEER OPEN TRAINING</b>	<b>MAINTENANCE ENGINEER CUSTOM TRAINING</b>	<b>MAINTENANCE ENGINEER CUSTOM TRAINING; 3030IL RECEIVER MAINTENANCE</b>	<b>CALIBRATION ENGINEER CUSTOM TRAINING</b>
	Course designed for Service Engineer that needs to perform preventive/corrective maintenance, diagnostic and parts identification and replacement of the ATE.	Course designed for Service Engineer that needs to perform preventive/corrective maintenance, diagnostic and parts identification and replacement of the ATE.	Course designed for Service Engineer that needs to perform preventive/corrective maintenance of the 3030 IL receiver.	Course designed for Service Engineer that needs to perform electrical calibration/adjustment of Ict instruments. They will also be able to certify by their own the calibration results.
<b>Code</b>	TME 101	TME 102	TME 106	TME 104
<b>Training Goal</b>	Service maintainer	Service maintainer	Service maintainer	Service certifier
<b>Training Level</b>	Intermediate	Intermediate	Intermediate	Intermediate
<b>Duration</b>	2 days	2 days	2 days	1 day
<b>Multi Company</b>	●			
<b>SPEA Site</b>	●	●	●	●
<b>On-Site (A)</b>		●	●	●
<b>Exercise on training kit</b>			(C)	(C)
<b>Exercise on customer product</b>				
<b>Requirements</b>	<ul style="list-style-type: none"> <li>Test program user or equivalent skills of the main parts of the system</li> </ul>	<ul style="list-style-type: none"> <li>Test program user or equivalent skills of the main parts of the system</li> </ul>	<ul style="list-style-type: none"> <li>Test program user or equivalent skills of the main parts of the system</li> </ul>	<ul style="list-style-type: none"> <li>Test program user or equivalent skills of the main parts of the system</li> </ul>
<b>Skills (B)</b>	<ul style="list-style-type: none"> <li>BON-SERV-101B - Electrical maintenance and diagnostic operations.</li> </ul>	<ul style="list-style-type: none"> <li>BON-SERV-101B - Electrical maintenance and diagnostic operations.</li> </ul>	<ul style="list-style-type: none"> <li>BON-SERV-104B - Mechanical maintenance operations (3030-IL only)</li> </ul>	<ul style="list-style-type: none"> <li>BON-SERV-102B – Calibration.</li> </ul>

(A) Journey expenses to be quoted according distance.

(B) The training contents could be affected to the functions configuration available on customer system.

(C) Require specific tools kit which is sold separately.

(D) Customer equipment required (fixture/cable, board, test program).

# E-Learning Training

	QSOFT E-LEARNING	PCBA DESIGN FOR TESTABILITY E-LEARNING
	Course designed for Production Operator that needs to use several packages of the Qsoft software suite for board repairing.	Course designed to help the board designer to create a product that can be tested easily, quickly and with the best possible coverage on Flying Probe and Bed-of-Nails testers.
<b>Code</b>	QS ELEA 100	DFT 101
<b>Training Goal</b>	Software user	PCB designer
<b>Training Level</b>	Beginner	Beginner
<b>Duration</b>	1 hour	1 hour
<b>Availability</b>	All Qsoft software suite purchased	On demand
<b>Users</b>	Unlimited	Unlimited
<b>Requirements</b>	<ul style="list-style-type: none"> <li>None.</li> </ul>	<ul style="list-style-type: none"> <li>Electronic PCB board design.</li> </ul>
<b>Skills (B)</b>	<ul style="list-style-type: none"> <li>FP-BON-USE-202B - QSoft</li> </ul>	<ul style="list-style-type: none"> <li>Design of testability for Flying Probe and 3030 testers</li> </ul>

# All Flying Probe Skills

## Beginner

PROGRAMMING – PRODUCTION OPERATIONS – SERVICE

### FP-PROG-0018 - Ict-Off test program

- Test program generation and debug starting from input files (CAD, BOM and Diagrams).
- Test program coverage result: Ict-Off, Optical, Led color, Electro Scan, Junction Scan, Laser, Nst.
- Test program options: add compositions, tools and certifications.

### FP-PROG-0048 - Leonardo Board Learn

- LEONARDO Board Learn test program acquisition starting from Images files and golden board.
- LEONARDO Board Learn test program acquisition starting from Pick&Place file and golden board.

### FP-PROG-0058 - Leonardo Autoprogram

- LEONARDO Autoprogram test program generation and debug starting from input files (CAD and BOM).
- Test program coverage result: Ict-Off, Optical Test.
- Test program options: compositions, tools and certifications.

### FP-PROG-0078 - Leonardo Pcb

- LEONARDO Pcb test program generation and debug starting from input files (CAD only).
- How to read Test program coverage: short, continuity and insulation for bare board testing.
- Test program options: tools and certifications.

### FP-PROG-0088 - Leonardo Board Repair

- LEONARDO Board Repair test program generation for repairing starting from Golden Board.
- How to use the automatic function for self-learning components and nets impedance.
- How to use tools for net list acquisition and schematics generation.
- How to increase test program Coverage with: mostel, transistor, relay, sink test, dual sink test, nodal voltage test, custom parameters (accordingly to the board under test).
- How to create custom test list.
- How to use repairing tools on repair environment.

### FP-SERV-1038 - System Installation

- Flying Probe movement and handling for positioning.
- Common operations for Flying Probes installation and startup like: system parts check, power supply check and connections, positioning, levelling, switch on, diagnostic operations and basic maintenance.

### FP-USE-2018 - Production operations

- Test program use, startup and stabilization on production lot.
- UIIT fail results understanding and troubleshooting (system tools use for repairing)
- Test program settings (serial number, certification data collection...)
- Test area operations as: board contrast handling, removable shuttle handling, system equipments (cable or fixture), probe exchanges.
- Fiducial management.
- Use of the test program release.
- Test program maintenance (debug techniques) for small changes as: guard, test points, test time, ...
- Test program options: compositions (variant), tools and certifications.
- System diagnostic execution.
- Mechanical tools alignment (probes, electro scan, multi probe, fingers, BTU).
- Test area sensors adjustment.

### FP-BON-USE-2028 - QSoft

- Configure the test program using QSoft.
- Use of the packages suite as: test data repair, statistics and certifications, option and customizations.

### FP-BON-USE-2038 - Automation

- How to set up the test program in order to use Test Cell Automation, such as: Loader, Unloader, Flip Over Mechanism.

## Intermediate

PROGRAMMING – SERVICE

### FP-PROG-0028 - Smart Obp

- How to configure the parameters for component programming using the SMART OBP environment.

### FP-PROG-0048 - Leonardo Cad Builder

- LEONARDO Cad Builder used for golden board reverse engineering acquisition to obtain input files as: CAD (Falt format), BOM and Diagrams.

### FP-PROG-0098 - Leonardo board data re-build

- LEONARDO Board Data re-built starting from: sample board, diagrams, BOM and Gerber files.
- LEONARDO Board Data re-built starting from: sample board, diagrams, BOM and images.

### FP-PROG-0108 - Test program migration

- Use of Tokaya migration pack.
- Convert the test program among different SPEA's test platform.

### FP-PROG-0118 - Ict-On from probes without adapter

- LEONARDO Express test program generation and debug starting from input files (CAD, BOM and Diagrams) review.
- Highlights Ict-Off test on: transformers, triac, scr, Transorb, cluster (series of 2 or more components).
- Highlights Ict-On from probes as: frequency measure, sink test on single and dual power, nodal voltage test, voltage regulators, how to use the generators as load.
- Use the functions as: import and insert from.

### FP-PROG-0148 - Test program migration

- How to migrate the test program from old ATE to the new ATE («ATOS to Leonardo OS» or «Leonardo OS Old to Leonardo OS New»).

### FP-SERV-1018 - Electrical maintenance and diagnostic operations

- System architecture overview (block diagram and board identification).
- Yearly electrical maintenance and diagnostic operations
- Diagnostic report check and interpretation.
- Interpretation of the systems sensors via the Service Automation Console and I/O Monitor.
- Use of the Service Interval.
- Mechanical tools alignment (probes, electro scan, multi probe, fingers, BTU).
- Repair: rack card identification and replacement, fuses and relays replacement, Axis card replacement (no electrical calibration), Z axis cable replacement, fault simulation and practical exercises.
- How to use CSA area (RAN, SPR, APR, HPR) and SPEA eShop.

### FP-SERV-1028 - Calibration

- YAICT, YASAU, YAGEN, YAPROCO and ZPROMEA calibration and adjustment operations.
- How to use the calibration and adjustment tools: Z037100, Multimeter and Counter.
- How to fill and read the calibration report for auto-certification.

## Expert

PROGRAMMING

### FP-PROG-0138 - Libraries

- Create and use a new Component Data.
- Create a new library and a new custom test model starting from an existing one.
- Use custom libraries during test program generation.
- Copy a test already debugged in the library to use it for future test program generation.

### FP-PROG-0038 - Tools integration on test program

- Bottom Mullprobe Unit (BMU) programming and use on an existing Leonardo test program. Case studied: BMU for power-on test, BMU for Gopel boundary scan integration.
- Xtag application integration on an existing Leonardo test program (no Xtag application programming is included).

### FP-PROG-0128 - Ict-On From probes with adapter (cable/fixture/fixd probe)

- LEONARDO Express/Advanced test program generation and debug starting from input files (CAD, BOM and Diagrams).
- How to design the equipment for powering-up the unit under test (block diagram and wiring diagram). Case study: cable/fixture/fixd probe.
- How to structure the Ict-On test program.
- Use of SPEA's libraries to find alias components.
- Generate and debug powered tests for analog/digital and operational amplifier components.

**NOTICE: all skills are closely related to the customer system/software configuration.**



# All 3030 Skills

## Beginner

### PROGRAMMING – PRODUCTION OPERATIONS – SERVICE

#### FP-PROG-001B - Ict-Off test program

- Test program generation and debug starting from input files (CAD, BOM and Diagrams).
- Test program coverage result: Ict-Off, Optical, Led color, Electro Scan, Junction Scan, Laser, Nzt.
- Test program options: add compositions, tools and certifications.

#### FP-PROG-004B - Leonardo Board Learn

- LEONARDO Board Learn test program acquisition starting from Images files and golden board.
- LEONARDO Board Learn test program acquisition starting from Pick&Place file and golden board.

#### FP-PROG-005B - Leonardo Autoprogram

- LEONARDO Autoprogram test program generation and debug starting from input files (CAD and BOM).
- Test program coverage result: Ict-Off, Optical Test.
- Test program options: compositions, tools and certifications.

#### FP-PROG-007B - Leonardo Pcb

- LEONARDO Pcb test program generation and debug starting from input files (CAD only).
- How to read Test program coverage: short, continuity and insulation for bare board testing.
- Test program options: tools and certifications.

#### FP-PROG-008B - Leonardo Board Repair

- LEONARDO Board Repair test program generation for repairing starting from Golden Board.
- How to use the automatic function for self-learning components and nets impedance.
- How to use tools for net list acquisition and schematics generation.
- How to increase test program Coverage with: masfet, transistor, relay, sink test, dual sink test, nodal voltage test, custom parameters (accordingly to the board under test).
- How to create custom test list.
- How to use repairing tools on repair environment.

#### FP-SERV-103B - System installation

- Flying Probe movement and handling for positioning.
- Common operations for Flying Probes installation and startup like: system parts check, power supply check and connections, positioning, levelling, switch on, diagnostic operations and basic maintenance.

#### FP-USE-201B - Production operations

- Test program use, startup and stabilization on production lot.
- UUT fail results understanding and troubleshooting (system tools use for repairing)
- Test program settings (serial number, certification data collection, ...)
- Test area operations as: board contrast handling, removable shuttle handling, system equipments (cable or fixture), probe exchanges.
- Fiducial management.
- Use of the test program release.
- Test program maintenance (debug techniques) for small changes as: guard, test points, test time, ...
- Test program options: compositions (variant), tools and certifications.
- System diagnostic execution.
- Mechanical tools alignment (probes, electro scan, multi probe, fingers, BTU).
- Test area sensors adjustment.

#### FP-BON-USE-202B - QSoft

- Configure the test program using QSoft.
- Use of the packages suite as: test data repair, statistics and certifications, option and customizations.

#### FP-BON-USE-203B - Automation

- How to set up the test program in order to use Test Cell Automation, such as: Loader, Unloader, Flip Over Mechanism.

## Intermediate

### PROGRAMMING – SERVICE

#### FP-PROG-002B - Smart Obp

- How to configure the parameters for component programming using the SMART OBP environment.

#### FP-PROG-004B - Leonardo Cad Builder

- LEONARDO Cad Builder used for golden board reverse engineering acquisition to obtain input files as: CAD (Foff format), BOM and Diagrams.

#### FP-PROG-009B - Leonardo board data re-build

- LEONARDO Board Data re-built starting from: sample board, diagrams, BOM and Gerber files.
- LEONARDO Board Data re-built starting from: sample board, diagrams, BOM and Images.

#### FP-PROG-010B - Test program migration

- Use of Takaya migration pack.
- Convert the test program among different SPEA's test platform.

#### FP-PROG-011B - Ict-On from probes without adapter

- LEONARDO Express test program generation and debug starting from input files (CAD, BOM and Diagrams) review.
- Highlights Ict-Off test on: transformers, triac, scr, Transzorb, cluster (series of 2 or more components).
- Highlights Ict-On from probes as: frequency measure, sink test on single and dual power, nodal voltage test, voltage regulators, how to use the generators as load.
- Use the functions as: Import and Insert from.

#### FP-PROG-014B - Test program migration

- How to migrate the test program from old ATE to the new ATE (eATOS to Leonardo OS or Leonardo OS Old to Leonardo OS New).

#### FP-SERV-101B - Electrical maintenance and diagnostic operations

- System architecture overview (block diagram and board identification).
- Yearly electrical maintenance and diagnostic operations
- Diagnostic report check and interpretation.
- Interpretation of the system sensors via the Service Automation Console and I/O Monitor.
- Use of the Service Interval.
- Mechanical tools alignment (probes, electro scan, multi probe, fingers, BTU).
- Repair: rack card identification and replacement, fuses and relays replacement, Axis card replacement (no electrical calibration), Z axis cable replacement, fault simulation and practical exercises.
- How to use CSA area (RAN, SPR, APR, HPR) and SPEA eShop.

#### FP-SERV-102B - Calibration

- YAICT, YASAU, YAGEN, YAPROCO and ZPROMEA calibration and adjustment operations.
- How to use the calibration and adjustment tools: Z037100, Multimeter and Counter.
- How to fill and read the calibration report for auto-certification.

## Expert

### PROGRAMMING

#### FP-PROG-013B - Libraries

- Create and use a new Component Data.
- Create a new library and a new custom test model starting from an existing one.
- Use custom libraries during test program generation.
- Copy a test already debugged in the library to use it for future test program generation.

#### FP-PROG-003B - Tools integration on test program

- Bottom Mullprobe Unit (BMU) programming and use on existing Leonardo test program. Case studied: BMU for power-on test, BMU for Gopel boundary scan integration.
- XJtag application integration on existing Leonardo test program (no XJtag application programming is included).

#### FP-PROG-012B - Ict-On from probes with adapter (cable/fixture/fixed probe)

- LEONARDO Express/Advanced test program generation and debug starting from input files (CAD, BOM and Diagrams).
- How to design the equipment for powering-up the unit under test (block diagram and wiring diagram). Case study: cable/fixture/fixed probe.
- How to structure the Ict-On test program.
- Use of SPEA's libraries to find alias components.
- Generate and debug powered tests for analog/digital and operational amplifier components.

**NOTICE: all skills are closely related to the customer system/software configuration.**

# 2016 Open Classroom Training Calendar

Training	Level	System	Duration	Start Day	2017 Calendar					
TEST ENGINEER OPEN TRAINING	BEGINNER	3030	5 days	Monday	Jan	Mar	May	Jul	Sep	Nov
		Flying Probe S2	5 days	Monday	WK2	WK11	WK20	WK28	WK37	WK46
PRODUCTION OPERATOR OPEN TRAINING	BEGINNER	3030	2 days	Tuesday	Feb	Mar	May	Jul	Sep	Nov
		Flying Probe S2	2 days	Tuesday	WK4	WK13	WK22	WK30	WK39	WK48
MAINTENANCE ENGINEER OPEN TRAINING	INTERMEDIATE	3030	2 days	Tuesday	Feb	Apr	Jun	Oct		
		Flying Probe S2	2 days	Thursday	WK7	WK16	WK26	WK42		