



**IPC PROFESSIONAL TRAINING AND CERTIFICATION
POLICIES AND PROCEDURES**

Version 6 – June 2017

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1 BACKGROUND

This Policy and Procedures (P&P) document is applicable to IPC’s Professional Training and Certification Programs (hereinafter “Programs”), including lecture-based discrimination-skills courses (IPC-A-600, IPC-A-610, IPC/WHMA-A-620, IPC- 6012 and Designer Certification) and courses that include workmanship skills demonstration (J-STD-001 and IPC-7711/7721). The effective date of this P&P document is indicated in the cover page of this document, and these policies and procedures apply to any certification center master agreements in effect after that effective date, and any CIT and MIT agreements signed after that effective date.

This policy document is subject to change without notice and therefore all MITs and CITs are required to visit the Training and Certification portal at the webpage <https://certification.ipc.org> prior to each time a course is taught in order to review and confirm the most current P&P document.

Furthermore, all new certification program revisions will be designed and released with a separate module focused on policies and procedures. When available, all trainers will need to use the latest module when delivering a class so as to ensure that the latest policies are being taught within a given certification program.

Questions regarding the program policies, procedures and application or requests for extension of Trainer certification should be directed to IPC Certification Program Office through the Certification Help Desk. The help desk is linked from the Online Certification Portal (<https://certification.ipc.org>).

IPC is the sole certifying authority for all Programs.

IPC has the right and responsibility for maintenance of the Programs. IPC reserves the right to make changes to the requirements for certification to the Programs.

Changes will be communicated by email, the IPC Websites, or by other formats. It is the responsibility of the program user to remain aware of updates to requirements and Programs.

2 REGIONAL RESTRICTIONS

There are unique requirements for any Licensed Training Center or CIT or MIT that desires to conduct training in The People’s Republic of China, India, Thailand, and Vietnam. Anyone who desires to conduct IPC training in any of these countries must obtain written permission from IPC before scheduling or conducting such IPC training. The foregoing provision overrides anything to the contrary in any master agreement or other agreement between IPC and any Licensed Training Center, CIT or MIT.

3 TERMS AND DEFINITIONS

- a) Licensed Training Center or Training Center: Any training center licensed by IPC pursuant to the IPC Certification Center Master License Agreement or the IPC Private Certification Center Master License Agreement. There are two types of Licensed Training Centers: a Public Training Center and a Private Training Center, as defined below.
- b) Public Training Center: A Licensed Training Center with the purpose of employing or contracting MITs to conduct publicly available CIT training courses.

- c) Private Training Center: A Licensed Training Center with the purpose of employing or contracting MITs to conduct training courses within a company or corporation.
- d) In-House Training:
 - 1. Training conducted by a Private Training Center within the Private Training Center's branches, locations, or sites to certify employees of the Training Center's owning company.
 - 2. Training contracted for and conducted by a Public Training Center at a customer's location for that customer's employees only.
- e) Remote Administration: Monitoring or proctoring an exam by webcam, telephone, video camera, or other remote means wherein a proctor is not physically present in the room with the test-taker.
- f) Online Exam Format:
 - 1. The Online Exams or Online Print Exams as presented through the Online Certification Portal used for the completion of the Programs.
 - 2. Reporting the results of all Online Exams and Online Print Exams through the Online Certification Portal.
- g) MIT: Master IPC Trainer. An MIT provides training and certification to CIT, Design CIT, Design+ CIT, CIS, CID, or CID+.
- h) CIT: Certified IPC Trainer. A CIT provides training and certification to CIS, CID or CID+.
- i) CIS: Certified IPC Specialist
- j) CID: Certified Interconnect Designer
- k) CID+: Advanced Certified Interconnect Designer

4 GOALS

The goals of the IPC Professional Training and Certification Programs are to:

- a) Deliver a standardized set of industry developed, recognized, approved and traceable training programs to enhance understanding and appropriate application of criteria in the standard(s) specific to each course of instruction.
- b) Provide an understanding of accept/reject criteria to enhance an individual's motivation and ability to consistently and correctly apply the criteria in the applicable standards.
- c) Teach methods and processes to help improve an individual's skills and ability to achieve acceptable workmanship.
- d) Communicate methods and techniques how to use, navigate, locate and to apply the criteria contained in the applicable standard(s) to the appropriate class or classes of production.

5 IPC PROFESSIONAL TRAINING AND CERTIFICATION PROGRAMS

The content of the Programs are developed by and through consensus of industry, including but not limited to members of IPC and many others such as representatives from academia, government agencies, original equipment manufacturers (OEM), electronic manufacturing service companies (EMS) and circuit board manufacturing companies, and are used worldwide.

Participation in any Program is voluntary. Membership in IPC is not required for use of any Program or for the use of any IPC Standard. However, IPC member companies enjoy discounts that non-members do not. Training consistency and program integrity is maintained by establishing certification criteria and control on all levels of the program through industry

consensus and the use of standardized training materials.

All CITs and MITs are required to agree to these Policies and Procedures, and must indicate that agreement by e-signature when accessing the Online Certification Portal. Instructors are required to access the Certification Portal at <http://certification.ipc.org> and indicate by e-signature an understanding of, and agreement to the Policies and Procedures herein. Such e-signatures result in these Policies and Procedures becoming a matter of contract between IPC and the signing party.

5.1 Certification Ownership

The certification (IPC Certificate) is granted to each individual who successfully completes the training, not to the employer. CIT, CIS or CID/CID+ Certification is a personal and portable credential. While it is appropriate for the employing company to have a copy of an individual's certificate for training and audit records, the original shall be issued to and retained by the certified individual.

MITs and CITs are encouraged to provide each trained individual a copy of the certificate along with the original either in hard copy or electronic format. For companies wishing to protect their investments in those for whom they pay for training, IPC staff may be consulted regarding various successful methodologies that have worked toward this end.

A CIT, CIS, or CID/CIT+ retains their certification even when changing employment (portable).

6 TRAINING AND CERTIFICATION TEAM MEMBERS

6.1 IPC Certification Program Office

The IPC Certification Program Office consists of employees of IPC, including but not limited to the members of the IPC Certification Department.

The IPC Certification Program Office is an IPC function responsible for:

- a) Approval and administration of Training Center licenses.
- b) Approval and administration of Program translation agreements.
- c) Facilitating Program development meetings.
- d) Periodic auditing of Licensed Training Centers, MITs, and CITs to ensure compliance to the Policies and Procedures.
- e) Reproducing and distributing training material.
- f) Tracking Program participants.
- g) Providing policy interpretation and Program issue resolution.

6.2 IPC Training and Certification Advisory Committee

The IPC Training and Certification Advisory Committee is comprised of industry representatives of all parties active and interested in the purposes and operation of the Programs. This committee represents the user's interests for the Programs by advising the IPC Certification Program Office on Program policy, procedures, implementation and improvements.

6.3 Technical Training Committees

Each Program has a unique Technical Training Committee chaired by a representative of the IPC user community and consisting of representatives from large and small industry user companies and training providers.

These committees:

- a) Review the technical content specific to that training Program to ensure accuracy in instructional materials used in the Program.
- b) Recommend prerequisite training and skill requirements.
- c) Recommend minimum testing and skills measurement requirements necessary for certification in that specific course; e.g. number of test questions and workmanship projects, passing grades.
- d) Recommend definition of mandatory and optional module breakdown for CIS training.
- e) Help establish the “industry developed, approved, and traceable” integrity of the Program, through course approval.

6.4 Marketing Partners

Trainers or Licensed Training Centers are permitted to use local partners to market or to facilitate financial or logistical support for Programs as long as the Programs are promoted showing association with the applicable trainers or Licensed Training Centers. Trainers or Training Centers will be held responsible for the marketing message and the behavior of their local partner. Improper promotion may result in suspension of the Training Center’s license and/or CIT certificate.

6.5 MIT

Only full-time, part-time, or contracted employees of Licensed Training Centers can be an MIT. MITs receive their certification from the IPC Certification Program Office. The MIT credential is directly tied to a single employing Training Center unless otherwise approved by IPC.

The minimum MIT candidate experience will be as the primary trainer for two CIS courses covering all mandatory and optional modules for the specific course, to a minimum of ten people total. The MITs for the designer training courses will be as designated by the IPC Design Executive Council, the Technical Training Committee for CID and CID+ Programs.

Separate MIT credentials are required for each Program. Every MIT for a Program shall maintain certification as a CIT for that Program. Additional MIT qualification requirements may be established by the Technical Training Committees. The MIT period of certification will coincide with the CIT certification.

Design MITs may conduct either Design CIT or Design+ CIT training or certification.

MITs provide the first level of technical and administrative support to CITs and CISs they have trained. This includes assistance with understanding of the Policies and Procedures and criteria of the standard(s) or courses.

All MITs are required to complete the current revision of the IPC Essentials course.

MITs, MIT CIDs, and MIT CID+s are granted and encouraged to use the designation on letterhead, business cards, and all forms of address. Appropriate use is all UPPER-CASE LETTERS with no periods or spaces.

6.6 CIT

Separate CIT credentials are required for each Program. A CIT for a Program may conduct CIS training and certification only to that Program. A Design CIT or Design+ CIT may conduct CID or CID+ training only as specifically authorized. CITs are qualified and authorized to perform all CIS/CID/CID+ tasks for that program.

CITs may be:

- a) Employees of companies that train only within their parent company.
- b) Faculty members of education and training institutions, such as technical schools or community colleges that train a variety of current and future workers.
- c) Members of a Licensed Training Center when that individual has not yet met the criteria for being an MIT.
- d) Independent consultants who work with a variety of companies.
- e) Conductors of CIS or CID training for any organization that desires such training and in accordance with the Policies and Procedures defined herein.

CITs are authorized to deliver, administer, and grant CIS or CID / CID+ certification credentials to individuals that successfully complete the required Program and/or pass the minimum skills measurement criteria set by each Program's Technical Training Committee. This will include, as a minimum, passing all required examination(s) and, as defined in the Program, may require acceptable completion of specific workmanship demonstrations. All examination(s) are required to be delivered and administered through the Online Certification Portal – see section TESTING for additional information including requirements for delivering Online Print Exams.

CITs whose certifications have expired are not authorized by IPC to conduct CIS or CID / CID+ training, grant CIS or CID / CID+ certification or purchase CIS or CID / CID+ training materials until they have recertified.

Any CITs may be periodically observed during class instruction by IPC staff or MITs to ensure that quality of instruction is maintained.

CITs, CIDs, and CID+ are granted and encouraged to use the CIT or CID / CID+ designation on letterhead, business cards, and all forms of address. Appropriate use is all UPPER-CASE LETTERS with no periods or spaces.

The certification expiration date for the add-on space certificate for CIT is established by the matching base certification.

All CITs are required to complete the current revision of the IPC Essentials course.

6.7 CIS, CID and CID+

Separate CIS or CID / CID+ credentials are required for each Program. The Programs will train, test and certify in the correct application of the criteria for all acceptance classes. CIS or CID / CID+ certification may be granted by either a CIT or MIT for that Program.

CIS training and certification is appropriate for any individual that will benefit by having a consistent understanding of the criteria in a standard.

CID and CID+ training and certification is appropriate to provide and enhance knowledge on how to transform an electrical circuit description into a PCB design that can be manufactured,

assembled, tested.

CIS training is modular. The Technical Training Committee for each Program will define the course module(s) that are mandatory or optional for that Program. Upon successful completion of the mandatory modules, optional modules may be selected as appropriate to support various technology segments.

In order to meet specific skills requirements, training must be conducted to the required modules (listed below) and to the appropriate additional knowledge modules.

For example, to carry out the inspection process according to J-STD-001 the required module must be completed first and Module 5 – Inspection must also be successfully completed.

The required modules for each CIS Program are as follows:

- a) J-STD-001 – Introduction, Policy & Procedures, and Module 1 – General Requirements
- b) J-STD-001 Space Addendum – J-STD-001(revision specific) required modules plus 1 additional, Optional Module
- c) IPC-A-610 – Module 1A - Introduction, Module 1B - Policy & Procedures, Module 2 – Forward, Applicable Documents, and Handling
- d) IPC/WHMA-A-620 – Module 1 – Course Introduction
- e) IPC/WHMA-A-620 Space – IPC/WHMA-A-620 (revision specific) certification to all modules
- f) IPC-A-600 – Modules 1 and 2– Policies & Procedures and Introduction
- g) IPC-6012 – Single Module Course – Space and Automotive Addendum are optional
- h) IPC-6012 [revision] Space – IPC-6012 (revision specific) certification
- i) IPC-6012 [revision] Automotive – IPC-6012 (revision specific) certification
- j) IPC-7711/7721 – Module 1 – Policies & Procedures, Common Procedures
- k) CID – No Optional Modules
- l) CID+ – No optional modules

The CIS certificates include endorsement blocks for each module of instruction. The CIT will initial and date each module that is successfully completed. The certification expiration date established by the mandatory module(s) will be applicable to all optional modules, regardless of when the optional module training and certification was granted.

The certification expiration date for the add-on space modules for CIS are established by the mandatory modules.

The CID Program credentials are two levels, CID and CID+.

Individuals with CIS or CID/CID+ credentials are granted and encouraged to use the CIS or CID/CID+ designation on letterhead, business cards, and all forms of address. Appropriate use is all UPPER-CASE LETTERS with no periods or spaces.

7 CERTIFICATION TERM

MIT, CIT or CIS certifications are valid for two (2) years. An extension can be granted to extend the period of certification as defined within these Policies & Procedures. Certification is valid through the last day of the month, regardless of the day of the month the certification was granted. Recertification is not currently required for CID/CID+.

7.1 Certification Extension

A single extension of 90 days beyond the two-year certification term may be granted* unless precluded by company policy. This certification extension offers a grace period during which an MIT, CIT, or CIS may perform the functions authorized by their certification. Such extensions shall be documented.

Certification extensions for CITs are granted through the Online Certification Portal in “My Certification Summary” linked from <https://certification.ipc.org>.

Certification extensions for CISs are granted by an MIT or CIT for that Program and are to be noted either on the CITs certificate or with the use of the optional CIS Extension form. Reporting to IPC is not required.

***Note that no extension will be granted past the 90 days listed above.**

7.2 Recertification

Certification for Programs must be periodically renewed (two-year cycle). The purpose of recertification training is to ensure continuing user competence by reinforcing material taught in the original course and to update users with corrections, amendments and additions to the Standard and the specific Program. CIT renewal is provided by an MIT. CIS renewal may be provided by any current MIT or CIT for that Program.

7.2.1 MIT Recertification Minimum Requirement

To be eligible to recertify as an MIT, an MIT must conduct at least two CIT courses (not challenge testing) to a minimum total of six CIT students in the fifteen months prior to MIT recertification. As an exception to conducting CIT training, within 15 months of recertification an individual may achieve MIT recertification authorization through participation in an IPC technical committee meeting or Technical Training Committee meeting for that Program, or by participating in a CIT beta (pilot) training class for development of a revised Program.

There is currently no recertification requirement for CID/CID+ MITs.

7.2.2 CIT Recertification - Minimum Class Presentation Requirement

In order for a CIT to be eligible for a recertification or challenge test for a Program, a minimum of 1 class in any of the certifications held by the CIT, per CIT, per year is required.

To be eligible for recertification or challenge test in a discrimination course, the courses presented may be either a discrimination course or a workmanship course.

To be eligible for recertification or challenge test in a workmanship course, one of the required 2 courses presented must be a workmanship course.

If this minimum class presentation is not met, full certification is required.

It is the responsibility of the individual holding the certificate to verify eligibility for recertification before contracting with a Training Center for recertification or challenge test.

A CIT who fails to disclose when these teaching requirements have not been met are subject to revocation of any or all IPC Certificates held by the CIT.

7.2.3 Certificate Renewal Options

Certification renewal for Programs can be accomplished using any of the following processes:

- a) Successfully complete the Program.
- b) Successfully complete recertification training for that Program where a unique recertification Program is available
- c) Successfully complete the challenge testing for that Program

Recertification that is accomplished within a 90-day window before the existing certification expiration date will be granted a new certification expiration date that is exactly two years following the existing expiration date.

Recertification that is accomplished within a 6-month window after the existing certification expiration date will be granted a new certification expiration date that is exactly two years following the existing expiration date.

That is, early recertification of up to 90 days will not incur a penalty on the two-year cycle nor will recertification within the 6-month window after certification add on to the two-year cycle.

When recertification is accomplished more than 90 days before the existing expiration, a new two-year expiration date will be established from the actual month of recertification.

When the term of certification has expired, the CIT or CIS is not authorized to perform the functions of a CIT or CIS.

Any MIT or CIT whose certification has been expired more than six months will not be eligible to take the recertification course or challenge test. In such cases, to re-establish certification the MIT or CIT must attend the full certification course.

8 OBLIGATIONS OF PARTICIPANTS

Any party choosing to participate in any Program is obligated to follow the Policies & Procedures stated herein. IPC will not permit anyone to state that they are providing IPC training or IPC certification unless they follow these policies. Failure to comply with this policy may result in cancellation of a Training Center license, an individual's MIT, CIT, or CIS Certification. Failure to follow the requirements in the Policies and Procedures or to use the required IPC standard curriculum materials may render CIT or CIS certifications granted by the MIT or CIT invalid. Other legal remedies including, but not limited to, damages and recovery of lost income may also be considered as determined by IPC legal counsel.

8.1 Maximum Class Size

To ensure the personal attention required by the training, Program classes that have only lecture presentations are limited to fifteen (15) students per trainer.

Programs that have workmanship skills training shall be limited to twelve (12) students per trainer.

Design certification courses are limited to thirty (30) students per trainer.

8.2 Required Course Materials

The industry-approved curriculum materials available through IPC must be used to conduct training that will lead to IPC certification. **These copyrighted materials are the intellectual property of IPC and may only be used to conduct training that leads to issuance of an Official IPC Serialized Certificate.** It is not acceptable to delete, modify, or add any curriculum content except as authorized in writing by the IPC Certification Program Office.

Course revision may require the purchase of new kits from IPC to support training.

Each specialist training attendee must be provided with documents and other reference material required for use during the training class. This includes the requirement for each attendee to have access to either an electronic or printed standard for use during the training. **Unless otherwise noted on the material or permitted by IPC in writing, any reproduction of IPC materials is forbidden.**

In addition to the published standards and reference documents, only original publications of the training visuals and supplemental training materials as developed and revised by the specific Technical Training Committee and obtained from IPC may be used in the Programs. Materials authorized for reproduction by the user will be so identified and provided by IPC in electronic format in the course digital files or through download from the trainer support pages on the IPC website at www.ipc.org/certification.

Only Licensed Training Centers can purchase the course materials to train CITs. CIS/CID/CID+ course material for any Program may only be purchased for use by a CIT in that Program (or their employing company). Workmanship skills demonstration materials (PCB and component kits) that meet the practice and skills measurement requirements are not available from IPC but may be procured from other sources. Drawings to fabricate training PCBs are provided on the instructor's CD or download files as appropriate.

The purchased training materials are only authorized for use by MITs or CITs. The Instructor's guides may not be purchased, copied, studied, or otherwise used by anyone who is not an MIT or CIT.

8.3 Course Material Ownership

A limited number of kits of course material for training CITs are made available for use by MITs at Licensed Training Centers. **Except as specifically authorized, this material shall not be copied or otherwise reproduced/duplicated in any manner and remains the property of IPC.** This material must be surrendered to IPC if a training center license is cancelled by either party or if the MIT certification is no longer valid for any reason; e.g. expired or if the individual that was the MIT leaves that Training Center.

Materials (documents) used in Programs bear copyright notices affixed by the originating party and those notices must be honored by the receiving party or parties and must appear on all copies that may be further distributed.

Unauthorized translation of IPC material, use, or sale of unauthorized translated IPC materials without written permission from IPC is strictly prohibited.

8.4 CIT Kits to Train CIS

Upon certification or recertification as appropriate, the Training Center is required to provide

every successful CIT candidate in the Program with a CIT Instructor Kit to train CIS and any other material specified by the applicable Technical Training Committee for that Program. Requests for exceptions to the requirement to provide this training material, i.e. multiple attendees from the same location or subsequent recertification to the same program, must be approved in writing by the IPC on a case by case basis. Any CIT candidate that fails the electronic and/or workmanship exams will not receive a certificate of completion or the instructional materials used by CITs. See section TESTING regarding retesting.

Each CIS training attendee will be provided with documents and other reference material required for use during the training class in either paper or digital form. This includes the requirement for each attendee to have access to either an original electronic or original hard copy standard for use during the training. It is acceptable to re-use clean, original, unmarked standards from class to class, but each trainee is required to have their own student training materials (for review quizzes, project sheets and retention of notes taken during class). **Unless otherwise noted on the material, written permission is required from IPC for local reproduction of any copyrighted IPC materials.**

Any CIS candidate that fails the electronic and/or workmanship exams will not receive a certificate of completion. See section TESTING regarding retesting.

Material developed by and industry approved for use in Programs may not be copied, scanned, decompiled to prepare other training programs, resold or otherwise distributed.

9 TESTING

Skills measurement through electronic exams and demonstration of workmanship capabilities and understanding are part of the learning process. All workmanship skills demonstration projects and electronic examinations for both classroom and challenge testing shall be proctored in person by an MIT or CIT for that program except as allowed for DISTANCE LEARNING. Trainers are required to monitor workmanship practices during practice and graded projects to correct bad habits and reinforce good habits.

The Online Exam Format is to be used as the default mechanism for written exams. Online Exams are to be purchased through IPC Customer Service department. Online Exam credits appear as invoices in the certification portal and will be available for one year after purchase date after which point they expire. Refunds and/or substitutions will not be granted once the credits have been purchased. In certain cases, it may be possible to utilize the Online Print Exams option.

The Online Print Exams option is only applicable in cases where electronic online testing is not available due to lack of locally available infrastructure or access there to, or in cases of ITAR or similar national security restrictions. Online Print Exams should only be used in cases where the Online Exams cannot be successfully delivered due to issues outside of the trainer or training centers' control.

Upon successful completion of all Program requirements a candidate will be issued an electronic certificate which can be printed.

Program administrators including, but not limited to MITs or CITs, must exercise due care in safeguarding access or loss of any electronic exam including Online Print Exams and their respective answer keys or similar material so integrity of the Programs is not compromised. Any

lost or compromised material must be reported to the IPC Certification Program Office through the Certification Help Desk as soon as possible after discovery.

Each exam taken shall be completed in a single contiguous and continuous time block; exception is permitted for reasonable short breaks that are determined not to compromise the integrity of the examination. The individual Programs have established time periods for completing exams and workmanship skills demonstrations. Every effort should be made to adhere to the testing schedules. If extenuating circumstances warrant, reasonable additional time may be authorized at the discretion of the proctoring trainer; questions or concerns should be directed to the IPC Certification Program Office through the [Certification Help Desk](#).

9.1 CIT Retesting

An individual who completes the CIT course, but fails to pass the certification examination(s) at the completion of the course, on request of such an individual, shall be provided the opportunity to retest the failed portion(s) of the certification examination, if completed within 90 days following the original testing. A retest will be administered no sooner than thirty (30) days after the date of the initial test except as otherwise authorized by the IPC Certification Program Office. No Training Center is required to permit any individual to take more than a single retest in the 90-day retest period. At the discretion of the MIT, retesting may be limited to only the specific written examination or workmanship projects that were previously failed at no additional charge for the first retest of an individual module. After the first retest, exams through the portal will be charged an additional fee.

Example: if the open book test was satisfactory but the closed book test was failed, only the closed book test needs to be retested. If there is a requirement to attach two wires to a turret terminal and only one was completed satisfactorily, on retest two wires need to be attached satisfactorily.

Training Centers may charge fees for the cost of administering a retest and for providing CIS training materials to trainer candidates that ultimately complete all required examinations. The fee for administering a retest, to be set by each Training Center, shall not be set at a level that will, or is intended to, discourage applicants from taking a retest.

9.2 CIS Retesting

Any individual who completes the CIS course but fails to pass the certification measurement criteria at the completion of the course, shall, on request of such an individual, be provided the opportunity to attempt a retest of the certification measurement examination(s) not more than one test/retest of an individual module per calendar day following the original testing. At the discretion of the CIT, retesting may be limited to only the specific written examination or workmanship projects that were previously failed at no additional charge for the first retest of an individual module. After the first retest, exams through the portal will be charged an additional fee.

An example would be if there is a requirement to attach two wires to a turret terminal and only one was completed satisfactorily, on retest two wires need to be attached to a turret terminal satisfactorily.

Training Centers or CITs may charge a fee for the cost of administering a retest. This fee, to be set by each Training Center or CIT, shall not be set at a level which will, or is intended to, discourage individuals from taking a retest. Permitting a student to take more than one retest in a

90-day period is at the option of the trainer.

9.3 CID/CID+ Retesting

Any individual who completes the CID course but fails to pass the certification measurement criteria at the completion of the course, shall, on request of such an individual, be provided the opportunity to attempt a retest of the certification measurement examination(s).

Training Centers or CITs may charge a fee for the cost of administering a retest. This fee, to be set by each Training Center or CIT, shall not be set at a level which will, or is intended to, discourage individuals from taking a retest.

9.4 CIT Challenge Testing

Challenge testing is not acceptable for the first CIT certificate sought by an individual in any individual Program. Challenge testing is acceptable for recertification in a Program provided that the minimum of conducting 1 class per year has been met and the previous certification has not been expired more than six months.

The time to complete any portion of the skills measurement exams during CIT challenge testing shall not be greater than the typical time allocated for that same skills measurement action if it were completed in classroom training for that Program.

Technical instruction is not required to be provided to individuals choosing to take the challenge test option in lieu of classroom training; e.g., don't provide exam-based review in advance to testing. The instructor should provide information concerning test administration, explanation of terms, facility resources (shelter and evacuation procedures, etc.).

9.5 Recertification

A CIT whose certification has not been expired more than six months and who has trained a minimum of 1 class per year may challenge test for CIT recertification in that Program. Individuals who are recertifying in a Program that has been updated due to document revision or has been significantly changed are encouraged, but not required, to take the recertification course.

9.6 CIT Challenge Test Requirements

A CIT challenge test will involve the applicant satisfactorily completing the same examinations and skills demonstration(s) required of those taking the classroom course. It is not acceptable for a CIT to challenge test for a certification or recertification by completing less workmanship projects than the classroom course they are challenging. Individuals challenging recertification shall successfully complete at least the minimum number of projects of the classroom recertification class.

Training Centers may charge fees for the cost of administering a challenge test and for providing CIS training materials to Trainer candidates who successfully complete all required examinations. The fee for administering a retest, to be set by each Training Center, shall not be set at a level that will, or is intended to, discourage applicants from taking a challenge test.

Any challenger who successfully passes the electronic exam and workmanship skills demonstration examinations will be certified as a CIT. An individual who fails the certification examination and/or a retest will not receive a certificate or the instructional materials used by

CITs.

9.7 CIS Challenge Testing

Challenge testing, when proctored by an IPC trainer, is acceptable for CIS initial certification and subsequent recertification without taking the training course. Prequalification is limited to discussion with the individual or supervisor to assure a reasonable level of knowledge and experience related to the training topic.

A CIS challenge test for initial certification or recertification will involve the applicant satisfactorily completing the same examinations and skills demonstration(s) required of those taking the classroom course for any given CIS classroom course module.

Training Centers, MITs or CITs may charge a fee for the cost of administering a retest. This fee, to be set by each Training Center, MIT or CIT, shall not be set at a level which will, or is intended to, discourage individuals from taking a retest. No Training Center, MIT, or CIT is required to permit any individual to take more than a single retest of a failed challenge test in the 90-day period.

The time to complete any portion of the skills measurement exams during CIS challenge testing shall not be greater than the typical time allocated for that same skills measurement action if it were completed in classroom training for that Program.

Technical instruction is not required to be provided to individuals choosing to take the challenge test option in lieu of classroom training. The instructor should provide information concerning test administration, explanation of terms, facility resources (shelter and evacuation procedures, etc.).

9.8 Partially Completed Testing

In the event that an instructor is no longer available to complete any exams or workmanship for which the results have not been entered into the Online Certification Portal, a CIS may complete the testing as a challenge test.

10 DISTANCE LEARNING

Training processes other than specifically defined herein shall not be used to conduct Programs. See section TESTING for electronic testing requirements.

10.1 CIT Lecture-Based Distance Learning

Interactive Distance Learning for trainers by attending lectures (video conferencing or training conducted over the internet with a live trainer) is not acceptable for initial certification but is acceptable for recertification. The recertification course may not be used to attain initial certification.

Remote Administration of testing is not acceptable (see definition of Remote Administration in section DEFINITIONS).

Examinations shall be proctored in person. Access to an MIT must be available to the student during the exam in person, by webcam, phone, or other live connection.

No other type of CIT distance learning training is authorized for CITs.

10.2 CIT Workmanship Skills Distance Learning

Distance learning of any type is not acceptable for either initial certification or recertification of CITs in any Workmanship Portion of any program requiring hands-on demonstration of skills and workmanship.

10.3 CIS Lecture-Based Distance Learning

Interactive Distance Learning for CIS by attending lectures (video conferencing or training conducted over the internet with a live trainer) is acceptable for initial certification and subsequent recertification.

Remote administration of testing is not acceptable.

Examinations shall be proctored in person.

Access to a MIT or CIT must be available to the student during the exam in person, by webcam, phone, or other live connection.

No other type of CIS distance learning training is authorized.

10.4 CIS Workmanship Skills Distance Learning

Distance learning of any type is not acceptable for either initial certification or recertification of CIS in any program requiring hands-on demonstration of skills and workmanship.

11 FORMS AND DOCUMENTATION REQUIREMENTS

11.1 Training Reports

A report of completed training shall be submitted to IPC on completion of each training session or challenge certification/recertification class. This must be completed using the on-line reporting functionality within one week after the completion of the class. Failure to submit on-line reports will be considered a breach of policy and may result in the suspension or revocation of a trainer's credentials.

11.2 Student Feedback

All students should be encouraged to complete a standardized evaluation form at the end of the course. These comments are of most value to the trainer to identify opportunity for instruction improvement. Comments significant to the curriculum should be transcribed to the "Comment" field of the online class report submitted to IPC. They will help IPC and the technical training committees manage the course content to assure it is meeting user needs. The student evaluation may be a printed form provided by the trainer or an on-line form.

11.3 Authorization to Reproduce Forms

Forms that are noted as, "Printable" on the form or in the file name are authorized for local printing/reproduction by the users.

No other reproduction of IPC training materials is authorized without written permission.

11.4 Retention of Exams

Online Print Exams answer sheets and workmanship grading sheets (and optionally student evaluation forms) shall be retained by the CIT or training site for at least two (2) years following the completion date of the training. It may be necessary to produce this data to support an appeal or to validate a certification for ISO or other type of company or customer audit. Exams delivered via IPC electronic testing will be electronically captured. Retention of all materials beyond 2 years shall be per company policy.

11.5 Student Workmanship Examples

Workmanship samples may be retained and made available for review.

12 LIMITATION OF LIABILITY

In no event shall IPC be liable for any indirect, special, incidental, or consequential damages, including lost profits, of any kind regardless of the form of action, whether in contract, tort (including negligence), strict liability, or otherwise, even if IPC has been advised of the possibility of such damages. This limitation will apply notwithstanding any failure of essential purpose of any limited remedy provided herein. IPC's maximum liability under its certification programs shall not exceed the exam fee paid to IPC for the most recent exam.

13 APPEAL

Any user of the Programs defined herein shall have the right to appeal any administrative decision or action to the IPC Certification Program Office. Such appeal must be submitted in writing to the IPC Certification Program Office for review within 15 days of the aggrieved action. The IPC Certification Program Office reserves the right to refer the matter to the IPC Training and Certification Advisory Committee and key IPC staff members who may assist in providing recommendations or resolutions. The IPC Certification Program Office will issue a final decision within ten days.

14 REVISION TRACKING

From V1.1 to V1.2

1. Minor wording changes.

From V1.2 to 2

1. Minor wording changes throughout.
2. Added Table of Contents.
3. Added Background Section.
4. Added IPC Training and Certification Programs information.
5. Renamed from "Overview of IPC Training and Certification Programs" to "IPC Training and Certification Programs."
 - a. Moved Training and Certification Team Members.
 - b. Moved Authorized (Licensed) Training Center description and requirements.
 - c. Moved Master IPC Trainer (MIT) description and requirements.
 - d. Moved Certified IPC Trainer (CIT) description and requirements.
 - e. Moved Certified IPC Application Specialist (CIS).

- f. Added Certified Interconnect Designers (CID and CID+) description and requirements.
- 6. Added link for CIS Extension form.
- 7. Changed from 2 weeks for submission of reports to 1 week.
- 8. Added 6-month expiration limit to CIT and MIT for recertification.
- 9. Clarification for training material ownership.
- 10. Added CID/CID+ retesting.
- 11. Changed CIT Challenge testing to require full course to achieve initial certification in any CIT disciplines individually regardless of previously held credentials.
- 12. Added Regional Restrictions.

From V2 to V3

- 1. Minor wording changed throughout.
- 2. Modified section titles.
- 3. 1 – Added statement that policy document is subject to change without notice and requires all CIT and MIT to review the most recent document before each class.
 - a. Programs will be designed with modular policy module for ease of update.
- 4. Remove the advisory committee function for making recommendations to IPC President in cases of appeals.
- 5. Clarified that an MIT must be tied to a single employing Training Center unless otherwise approved and formally documented.
- 6. Added requirement for all exams to be delivered using the Online Certification Portal.
- 7. Added availability of temporary waiver for online print in cases of national security or total lack of internet access to a geographical area.

From V3 to V4

- 1. Added contact information for the appeals process.

From V4 to V4.1

- 1. Added link to Certification Help Desk and removed references to certification email inbox address.

From V4.1 to V5

- 1. Typographical and editorial corrections throughout.
- 2. Section 2 – New Section of Terms and Definitions.
- 3. Section 4 – IPC Training and Certification Programs.
 - a. Added requirement in final paragraph that all trainers must indicate agreement to the policy and procedures when signing in to the Certification portal.
- 4. Section 5 – Regional Restrictions.
 - a. Added statement that there are differing policies in specific parts of the world.
- 5. Section 6.1 – IPC Certification Program office.
 - a. Added statement of who is in the “IPC Certification Program Office”.
 - b. Clarified wording of Program Office responsibilities
- 6. Section 6.3 – IPC Technical Training Advisory Committee.
 - a. Modified section title to clarify the role of the advisory committees.
 - b. Clarifying wording for the committee responsibilities of advisory and recommendation. This is not a change of scope for the committees but a clarification of existing responsibilities.
- 7. Section 6.4 – IPC Authorized (Licensed) Training Center/Authorized Trainers.

- a. Added clarifying language that the section pertains to private centers, public centers, and individual trainers.
 - b. Added last paragraph for requirements for CITs.
- 8. Section 6.4.1 – Suggestion Retail Pricing.
 - a. New section defining minimum, suggested pricing for delivery of all IPC CIS programs.
- 9. Section 6.4.2 – Certification Center Requirements.
 - a. Sub Section 6.4.2.1 – Public Training Center Rights and Obligations.
 - i. Content restructured from previous revisions to clarify and define Public Center rights and obligations.
 - b. Sub Section 6.4.2.2 – Private Training center rights and obligations.
 - i. Content restructured from previous revisions to clarify and define private center rights and obligations.
- 10. Section 6.5 – Marketing Partners.
 - a. New section defines the requirements and allowances in the marketing of training programs to allow for the use of local partners and to allow trainers to take advantage of grants and training funds made available through local partners.
- 11. Section 6.8 – Official Title modified from, “Application Specialist” to, “Certified IPC Specialist”.
 - a. Added section defining mandatory modules for each training and certification program.
- 12. Section 7.2 – Certification ownership.
 - a. Changed wording from, “should be issued to individual” to, “shall be issued to and retained by the individual”. This further clarifies ownership of the certificate by the individual and not the employing company.
- 13. Section 7.4 – Certification Extension.
 - a. Changed from CIS extension form attached as an appendix to downloadable from IPC website.
- 14. Section 7.5 – Recertification.
 - a. Added requirement for CIT to teach at least two classes per certification period in order to be eligible for a Recertification or Challenge test.
 - i. Workmanship class requirement is to teach a workmanship class.
 - ii. Discrimination class requirement is to teach either a workmanship or discrimination class.
 - iii. The responsibility to verify eligibility for recertification/challenge test is on the individual, not the training company.
- 15. Section 8.2 – Required Course Materials.
 - a. Added content allowing the use of digital or printed standards for use by the students.
 - b. Specification that reproduction of any IPC materials without specific, written permission is forbidden.
- 16. Section 8.3 – Course Material Ownership.
 - a. Added restriction against unauthorized translation of IPC materials without written permission.
- 17. Section 9 – Testing.
 - a. Added content specifying that Online Exams are to be purchased through IPC Customer service.
 - b. Added content that invoices expire 1 year after the invoice is established.
 - c. Added content that all sales of invoices are final.
- 18. Section 9.4 – CIT Challenge Testing.
 - a. Added requirement for minimum of 1 class per year.
- 19. Section 9.5 Recertification (Discrimination or Workmanship Skills Courses).

- a. Added requirement for minimum of 1 class per year.
- 20. Section 10 – Distance Learning.
 - a. Sub Section 10.1 – CIT Lecture Based Distance Learning.
 - i. Specifies that Remote administration of testing is not acceptable.
 - ii. Added allowance for an in person, test proctor if a certified MIT is available by live connection.
 - b. Sub Section 10.3 – CIS Lecture Based Distance Learning.
 - i. Specifies that Remote administration of testing is not acceptable.
 - ii. Added allowance for an in person, test proctor if a certified MIT or CIT is available by live connection.
- 21. Section 12 – Limitation of Liability.
 - a. Limits of IPC Liability.

From V5 to V5.1

- 1. Typographical corrections
- 2. Section 6.4.1 – Suggestion Retail Pricing.
 - a. Clarification on hourly pricing pertains to per-student, per-hour.
 - b. Additional pricing model for Full Class of students from the same company.
- 3. Section 6.8 – Mandatory Modules
 - a. Clarification that the Space Modules are revision specific.

From V5.1 to V6

- 1. Typographical corrections
- 2. Standardized MIT, CIT, CIS, CID and CID+ use throughout
- 3. Section 1 - BACKGROUND
 - a. Clarified IPC’s role
 - i. As sole certificating authority
 - ii. IPC rights and responsibilities
 - b. IPC communication options
 - c. User’s responsibility for awareness of updates
- 4. Section 2 – REGIONAL RESTRICTIONS
 - a. Added requirement for approval of training courses in specific regions
- 5. Section 3 – TERMS AND DEFINITIONS
 - a. Added definitions for MIT, CIT, CIS, CID, CID+ Acronyms
 - b. Clarified and standardized
 - i. Licensed IPC Training Center name
 - 1. Public Training Center
 - 2. Private Training Center
 - c. Defined Online Exam Format
- 6. Section 5.1 – Certification Ownership
 - a. Moved from 7.2 to 5.1
- 7. Section 6.2 – IPC Training and Certification Advisory Committee
 - a. Clarified committee composition.
 - b. Clarified role of the committee
- 8. Section 6.4 – Marketing Partners
 - a. Clarified marketing partners and the responsibilities of the trainer or licensed IPC Training Center when working with marketing partners

9. PREVIOUS 6.4 – Suggested Minimum Retail Pricing – Removed
10. PREVIOUS 6.4.2 – Certification Center Requirements – Moved to specific licensed IPC Training Center agreement.
11. Section 6.5 – MIT
 - a. Added minimum MIT experience for initial MIT
12. Section 6.7 – CIS
 - a. Updated required modules to include IPC-6012 Automotive addendum
13. Section 7 – CERTIFICATION TERM
 - a. Renamed section
14. Section 7.2.1 – MIT Recertification Minimum Requirement
 - a. Moved to P&P from licensed IPC Training Center Agreement
15. Section 7.2.3 0 Certificate Renewal Options
 - a. Recertification within 6 months of original expiration maintains original certification date plus 2 years.
16. Section 8 – OBLIGATIONS OF PARTICIPANTS
 - a. Any certificate issued by an MIT or CIT while the MIT or CIT is in violation of the policies and procedures can be revoked.
17. Section 8.2 – Required Course Materials
 - a. Added statement that revision of a course may require purchase of new kits and materials for training.
18. Section 8.4 – CIT Kits Training CIS (Standards Based Programs)
 - a. Removed statements that CIT kits are company property.
19. Section 9 - TESTING
 - a. Clarified that training is to be proctored in person except as allowed in section DISTANCE LEARNING
20. Section 9.1 CIT Retesting (Standards Based Programs)
 - a. Clarified fee for retesting of individual modules
21. Section 9.9 – Challenge Test Preparation
 - a. Removed review of material for Challenge test.
22. Section 11.3 – Authorization to Reproduce Forms
 - a. All new material authorized for reproduction will have “Printable” on the form or in the file name.
23. Section 13 – APPEAL
 - a. Clarified chain of reporting and timeline for appeal process.