

In-Building Public Safety Communications Systems Certification

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Safer Building Coalition is the only advocacy group and resource for everything related to solving for **In-Building Wireless "Dead Zones".**

Our Scope includes all In-Building Technologies:
Commercial Cellular (LTE / 5G) • LMR (Land Mobile Radio) •
Emergency Responder Communications Enhancement Systems (ERCES) •
Private LTE • Future Technologies.



*Membership is **always free** for Gov't / Public Safety Staff*

The **Safer Buildings Coalition** is an independent, not for profit organization.

www.saferbuildings.org

3 Pillars of In-Building Public Safety Communications:



01

Mobile 911 Calls and Texts Must
Get Out with Location Accuracy



02

Mobile Mass Notifications Must
Reach Building Occupants



03

First Responder Communications
Must Work



- Competency of the Industry



NFPA 1225 – 2022 Edition



18.2* Approval.

Where an in-building emergency responder communications enhancement system is used, the design of the system shall be performed by an RF system designer and shall be approved by the AHJ and the frequency license holder(s).

3.3.115* RF System Designer.

An individual who has the education, experience, training, **and understanding of RF theory and application** to design an in-building emergency responder communications enhancement system (ERCES) that complies with this standard and the requirements of the licensing authority of the country of jurisdiction.



Increasing the Competency of the Industry

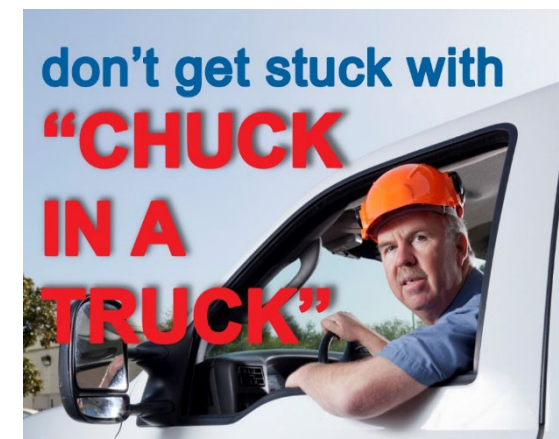


IFC 510.5.3 Minimum Qualifications of Personnel.

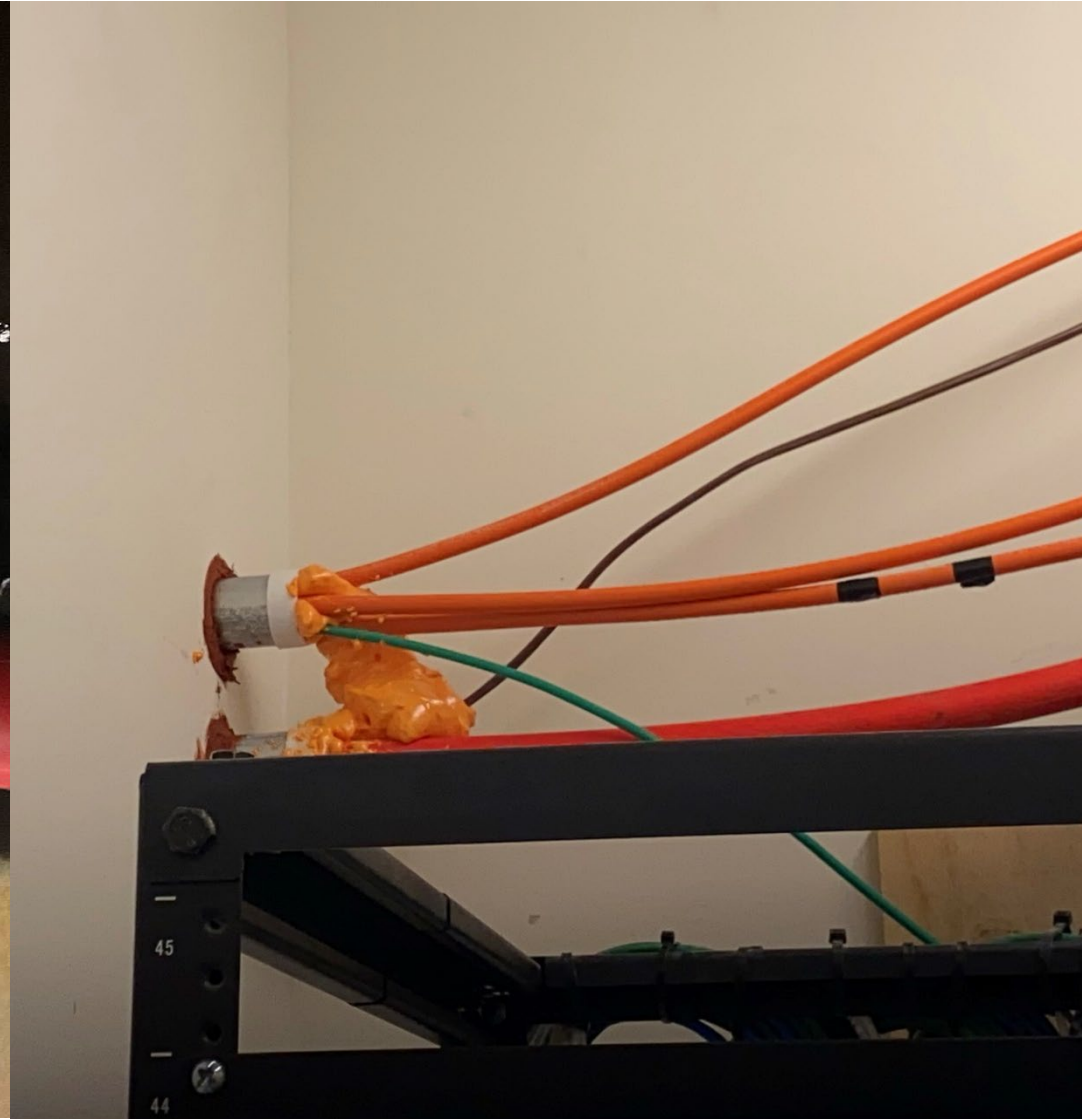
The minimum qualifications of the system designer and lead installation personnel shall include both of the following:

1. A valid FCC-issued general radio operator's license.
2. Certification of in-building system training issued by an **approved organization** or approved school, or a certificate issued by the manufacturer of the equipment being installed.

These qualifications shall not be required where demonstration of Adequate skills and experience satisfactory to the fire code official is provided.



Signs of Quality Workmanship?



Signs of Quality Workmanship?





Increasing the Competency of the Industry



In-Building Public Safety Communications (IB-PSC)

This certification program is designed for engineering technicians engaged in the detailing and layout, installation, and maintenance, and/or designing of in-building public safety communication systems. Technical areas covered include knowledge of radio frequency theory, equipment mounting requirements, delivered audio quality scale, business software and mathematics, communications using project specifications and documents, site survey data and design tools, and interpretation and evaluation of surveys.

The program consist of four levels – ALL AVAILABLE NOW:

- Technician – Levels 1, 2 & 3
- Design



Why NICET



- Recognized by Industry, Employers, AHJs, government entities, PEs, etc.
- Career Track through Certification Levels
- Continuing Professional Development through Recertification
- Active role in promoting the industry
- Valued Employee
 - Incentives for Certification
- Code of Ethics
 - Disciplinary Action



NATIONAL
SOCIETY OF
PROFESSIONAL
ENGINEERS



NSPE Quick History

David Steinman (1934)

- Protect engineers (and the public) from unqualified practitioners,
- Build public recognition for the profession, and
- Stand against unethical practices and inadequate compensation.

NICET History



- 1961 – The Institute For Certification in Engineering Technologies(ICET) established by NSPE.
 - A way for engineering technicians to be recognized as valued member of the engineering team.
- 1977 – Engineering Technologist Certification Institute (ETCI) established
- **1981** – ICET and ETCI combined to form **NICET**
- 2022 – NICET certifications are nationally recognized and internationally demanded.
 - Over 160,000 individuals certified since 1961!
 - Over 13,000 exams administered annually.

Professional Certification



- Measures Knowledge and Skills for **Individuals**
 - Exams
 - Clear Separation of Training and Certification Exams
 - Experience
 - Performance
- Distinguishes **Qualified** from the **not-yet** Qualified

Developing Qualified Workforce



- Increased **Safety** for Workforce and the Public
- Increased **Productivity**
- Improved **Quality**
- Cost **Savings**
- Reduce **Liability**
- **Retention**
- **Requirements** (federal, state, local, facility)

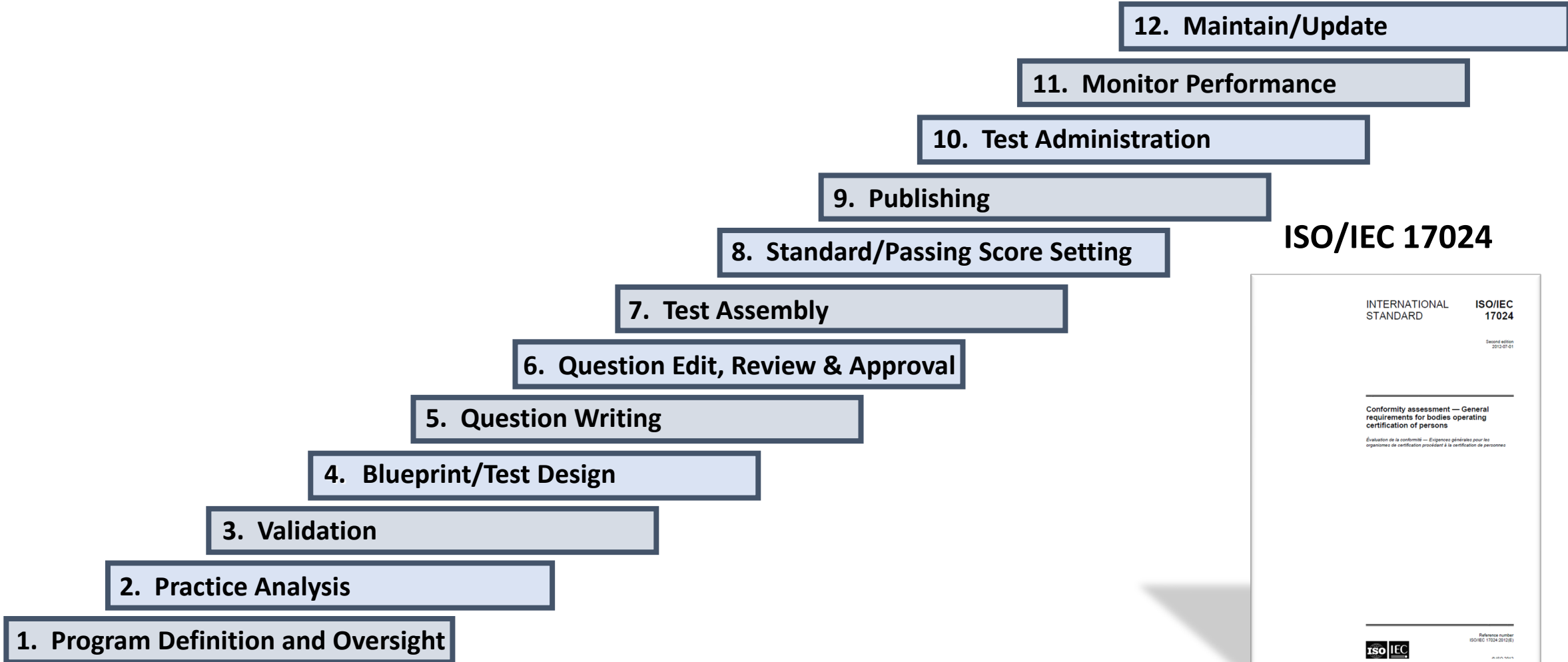


NICET Certification



- Third-Party Independent evaluator of knowledge and skills.
- Certification content and requirements established by industry experts and practitioners.

Program Development



ISO/IEC 17024



Development Volunteers



David Adams, PCTEL, Inc

John Batista, PWR Wireless

Michael T. Cassell, Communications Electronics

Jason Chambers, Day Wireless Systems

Brett Coe, RCDD

Christopher Creamer, DynaFire LLC

Matthew DiMarco, Airtower Networks

Ron Dowd

Andrew Ely, PierCon Solutions

Adam Feehan, PierCon Solutions LLC

Josh Gerst, RF Connect

Greg Glenn, Pulse Signal Solutions

Chris Godwin, RF Solutions LLC

Peter M. Goldring, SET, CFE, CAT-1, Goldring Protection

Gary Gray, City of Fort Lauderdale, Radio Systems Manager (retired)

Gabe Guevara, Westell Technologies Inc.

Steven D. Hall, Collier County Government

Nathaniel C. Hinkle

Steve Hronek, Comsec Associates, Inc.

Bob Jans, Industrial Communications & Electronics Inc.

BJ Klingensmith, APG Life Safety

Robert LaMadline, Elite Fire Safety, Inc.

Michael Littman, RF Solutions LLC

Matt Lunny, Comba Telecom Inc.

Casey McKenna, SET, ADT Commercial

Ted Metcalfe, Engineering Wireless Services

Derrick Mitchell, LS Systems

Jorge Molina, Industrial Communications & Electronics Inc.

James Moore, JM Electronic Engineering, Inc.

Michael Puskas, A.J. Kirkwood & Associates, Inc.

Mark Rice, TESSCO Technologies

Richard Roberts, Honeywell Fire Safety

Joe Rohlic, Radio One Inc.

Ernest Schirmer, WSP USA

Mike Schmitt, HCI Systems Inc.

Kevin Shea, USA Groups

Syed Sohaebuddin, Black Box Corporation

Edward Steffens, Iona McGregor Fire District

Brian Stuart, SET, ADT Commercial

Chet Taylor, ABIS Solutions

Joe Tirado, Cosco Fire Protection

Jared Vance, HUNT Electric, Inc.

John Vassel, Safety Systems Inc.

Robert Vasvary, Industrial Communications & Electronics Inc.

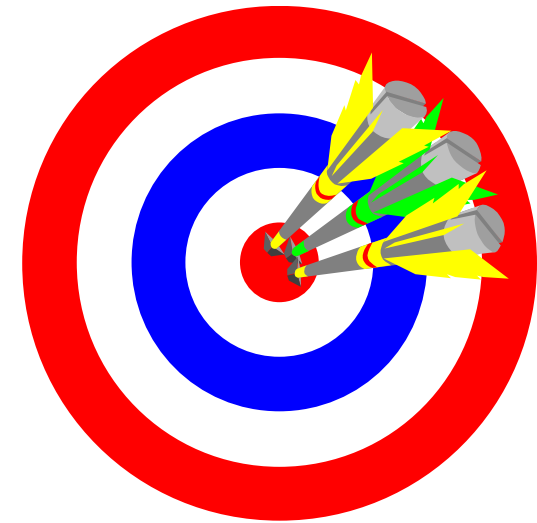
Corey Vaughan, PMC Associates

Kevin Vierling, Pando Telecom

NICET Certification



- Fair
 - No bias
- Valid
 - Covers the right material
- Reliable
 - gets the same results on multiple attempts
- **Legally Defensible ... all three**





Rigorous for a Reason!

- Knowledge
 - Exam/s
- Performance
 - List of **performance measures** must be verified for each level
 - Levels III and Design require **personal recommendation** forms
- Experience
 - Work History Requirements

Certification Requirements



| Level I | Level II | Level III | Design |
|--|--|---|---|
| <i>Examination- Pass the:</i> | | | |
| Level I Exam | Levels I and II Exam | Levels I, II, and III exams | Design exam |
| <i>Performance Verification- Obtain supervisor verification of:</i> | | | |
| All Level I Performance Measures | All Levels I and II Performance Measures | All Levels I, II, and III Performance Measures | All Design Performance Measures |
| <i>Work History- Provide complete, detailed position descriptions and time allocations showing¹:</i> | | | |
| A minimum of 6 months of technical experience in Emergency Responder Communication Systems (ERCS), which MUST include: At least 6 months direct | A minimum of 2 years of technical experience in Emergency Responder Communication Systems (ERCS), which MUST include: At least 12 months direct | A minimum of 5 years of technical experience in Emergency Responder Communication Systems (ERCS), which MUST include: At least 4 years of direct | A minimum of 2 years of technical experience in Emergency Responder Communication Systems (ERCS), which MUST include: At least 12 months of direct |


Value of Developing Qualified Workforce



NICET Exams

- Key features:
 - Candidate selects a **6-Month window** in which to test.
 - **Professional Proctors**
 - **Limited references** allowed, primarily codes and standards, allowable references listed on website.
 - Test specific **calculators** provided on screen.
 - Tests are **pass/fail**, unofficial results provided upon completion of the test





Work History

- Is a complete description of positions held and work performed. **All work activities, regardless of relevance to the certification, should be included.** Evaluators review the submitted work history for any specialty areas for which the candidate applies. NICET keeps all submitted work history as part of the candidates record. Updates can be submitted online as part of the candidate's profile.
- Know the requirements.
- Use Performance Measures as a guide.

Performance Measures (All Levels)

- A set of activities that a supervisor or someone in a supervisory capacity must verify that the candidate has performed satisfactorily. This section of the application must be completed by the verifier.





Verifier

- A current or previous supervisor as listed in the candidate's documented work history. The verifier does not have to be certified by NICET but must be a responsible and technically competent individual who is, or was, in a position and authority to directly supervise, inspect and/or approve the applicant's work and verify that the candidate has demonstrated the required competencies, specific accomplishments, and project work related to the certification subfield and level.
- A verifier cannot be a nontechnical supervisor, a peer, or a subordinate of the candidate.
- Company owners, company presidents and others in positions of similar hierarchies must find someone outside their company to serve as their verifiers, e.g., authority having jurisdiction, general contractor, engineering consultant, licensed engineers, etc.
- If a candidate has identified multiple current direct supervisors, the performance verification may be provided by a single verifier or a combination of verifiers as applicable.

Personal Recommendation- Required for Level III Design Only

- Must be completed by professionals who are familiar with the technical capabilities and background of the applicant and can attest to the technical quality, responsibility, and ethics demonstrated in the applicant's work experience.
- Can't also be Verifier



Continuing Professional Development


90 CPD points needed every 3 years for maintaining certification

| CPD Category | Maximum points per 3-year certification period | Percentage of 90-point total |
|------------------------|--|------------------------------|
| Active Practitioner | 72 (up to 24 per year) | 80 |
| Additional Education | 72 | 80 |
| Advance Profession | 45 | 50 |
| Certification Activity | 90 | 100 |
| Special Exam | 45 | 50 |

See NICET.ORG for definitions of these requirements


nicet-noreply@useclarus.com

The screenshot shows the NICET Certification Portal interface. At the top left is the NICET logo, a blue triangle with the word "NICET" below it. At the top right is a user profile box containing a person icon and the text "job@experience.com" with a dropdown arrow. On the left side, there is a vertical navigation menu with the following sections: "Home" (with a house icon), "CERTIFICATIONS" (with a list icon), "INFORMATION" (with a document icon), "EXAMS" (with a checkmark icon), and "CONTINUING PROFESSIONAL DEVELOPMENT" (with a book icon). The main content area is titled "Notifications" and has a "close all" button on the right. There are two notification cards: a light blue one that says "You have 1 exam application(s) in progress" with a "Click here to continue" link and a lock icon; and a light green one that says "Welcome to the NICET Certification Portal:" with a date of "Mar 12" and a close icon. The green card contains two bullet points: "If you are looking begin the process of becoming certified, click the **Browse Certifications** link." and "If you are looking to take a NICET exam only, click the **Exam Applications** link."



 job@experience.com ▾

Home



CERTIFICATIONS

-  Browse Certifications


INFORMATION

-  Documents
-  Messages


EXAMS

-  Exam Applications
-  Results

CONTINUING PROFESSIONAL DEVELOPMENT

-  Manage your CPD

Notifications close all

You have 1 exam application(s) in progress 
[Click here to continue](#)

Welcome to the NICET Certification Portal: Mar 12 ✕

- If you are looking begin the process of becoming certified, click the **Browse Certifications** link.
- If you are looking to take a NICET exam only, click the **Exam Applications** link.



90327@nicet-migration.com

Home

CERTIFICATIONS

Apply

My Certifications

INFORMATION

Documents

Messages

EXAMS

Schedule

Results

CONTINUING PROFESSIONAL DEVELOPMENT

Manage your CPD

Profile updated



Notifications

close all

You have 1 exam application(s) in progress
Click here to continue





Home

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EXAMS

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CONTINUING PROFESSIONAL DEVELOPMENT

Manage your CPD

Available Certifications

Building Public Safety Communications - Level III



In-Building Public Safety Communications - Level III

Requirements for Certification

Exam Requirements

click on exam to purchase

[IB-PSC - Level I Exam](#) →

[IB-PSC - Level II Exam](#) →

[IB-PSC - Level II Exam](#) →

Experience Requirements

- Work History
- Performance Verification
- Personal Recommendation

A minimum of 5 years of technical experience in Emergency Responder Communication Systems (ERCS), which MUST include: At least 4 years of direct involvement with technical experience with ERCS. These 4 years may include team leadership, installation, maintenance, inspection, testing, commissioning, technical system estimating and sales, plan preparation, code compliance review, project management, and/or technical business management. At least 12 months direct involvement overseeing technical business, installation, and project management in ERCS. May include up to 6 months of related ERCS experience. Related experience may include involvement in fire alarm, or other code-driven and/or life safety electrical building systems work beyond the scope of the core experience defined above for this Level, including, but not limited to, fiber optics, UTP, coax cabling, and wireless RF systems in the role/function of installation, inspection, testing, commissioning, maintenance, technical system estimating and sales, plans preparation, code compliance review, project management, or technical business management. It may also include providing full-time technical support or training to ERCS technicians.

Save to Home →





Home

CERTIFICATIONS

Apply

My Certifications

INFORMATION

Documents

Messages

EXAMS

Schedule

Results

CONTINUING PROFESSIONAL DEVELOPMENT

Manage your CPD

In-Building Public Safety Communications - Level III

Requirements for Certification

Exam Requirements

click on exam to purchase

[IB-PSC - Level I Exam](#)

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[Apply Here!](#)

Code of Ethics

- **NICET**-certified engineering technicians and technologists recognize that the services they render have a significant impact on the quality of life for everyone. As they perform their duties and responsibilities on behalf of the public, employers, and clients, they shall demonstrate personal integrity and competence. Accordingly, certificants shall:
- Have due regard for the physical environment and for public safety, health, and well being. If their judgment is overruled under circumstances where the safety, health, property, or welfare of the public may be endangered, they shall notify their employer, client, and such other authority as may be appropriate. An employee shall initially express those concerns to the employer.
- Undertake only those assignments for which they are competent by way of their education, training, and experience.
- Perform their duties in an efficient and competent manner with fidelity and honesty.
- Admit and accept their own errors when proven wrong and never distort nor alter the facts in an attempt to justify their decisions.
- Avoid conflicts of interest whenever possible. When unavoidable, they shall disclose to their employer or client, in writing, any action that might create the appearance of a conflict of interest.
- Avoid receiving and granting bribery in all its forms.
- Strive to maintain their proficiency by updating their technical knowledge and skills in engineering technology.
- Not misrepresent or permit misrepresentation of their own or their associate's academic or professional qualifications nor exaggerate their degree of responsibility for any work.
- Not reveal facts, data, or information obtained in connection with services rendered without prior consent of the client or employer except as authorized by law.

Final Instructions

Please confirm that your supervisors have completed the performance verification before finalizing your application.

**All Performance
Verification items are
complete.**

Yes

No

By clicking submit, I attest that the information is a true and complete breakout of the time I spent working in the subfields/technical areas indicated for the listed position. I understand that provision of misinformation is in violation of the NICET Code of Ethics and policy, and can result in the rejection of this application and/or the revocation of any certificate NICET has issued in my name.

I understand and agree to this affidavit

Finalize

Application Review Sequence

- Applications are entered into the queue once the exam requirement is met and “Finalize” is clicked in the application.
- Applications in queue are reviewed on a first-come/first-served basis.
 - NICET strives to complete all reviews within 90 days of entering the queue
- If all requirements are met certification is awarded. Certificates may be downloaded available in the public lookup immediately.
- If anything is missing or deficient NICET issues a Review Status Message (RSM)



Review Status Message (RSM)

- Review Status Message are added to the messaging section of the candidates record.
- The notice describes the requirements that still need to be met for the candidate to be awarded certification.





Increasing the Competency of the Industry



In-Building Public Safety Communications (IB-PSC)

- What does this certification program mean for the **AHJ**? **For Industry**? **For the Building Owner**?
- When will AHJs require certification as part of their process?

QUESTIONS?



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