



# BICSI Installer 2, Copper® (INSTC®) Handbook

**Bicsi**<sup>®</sup>

# Become a BICSI Installer or Technician

Congratulations on making the decision to advance your career through the BICSI Installation program. Whether you are new to the industry or a 20-year veteran, there is an opportunity that fits your needs. In this booklet you will find a list of application requirements, fees and exam information. As part of the handbook, we've included the BICSI Code of Ethics and Professional Obligations, and the BICSI Antitrust Statement.



The goal of BICSI's Cabling Installation Program is to produce highly competent cabling installers in a minimal amount of time and at a reasonable cost. BICSI's Cabling Installation Program provides installers with access to training in the proper and most current methods of installing information and communications technology (ICT) related cabling within the confines of a commercial building structure. Upon successfully passing your exam, you will be globally recognized as being able to conduct site surveys, pull wire/cable, and terminate and test copper and optical fiber cable to the highest level of specification.

The program offers core skills training, and both hands-on and written credentialing examinations to meet the diverse needs of the telecommunications cabling industry. BICSI's program provides varied levels of increased knowledge and experience: Installer 1; Installer 2, Copper; Installer 2, Optical Fiber; and Technician.

## BICSI Antitrust Statement

BICSI believes strongly in competition. U.S. antitrust laws are the rules under which our competitive system operates. It is BICSI's policy to comply in all respects with the antitrust laws.

Association meeting or workshops by their very nature bring competitors together. Accordingly, it is necessary to avoid discussions of sensitive topics. Agreements to fix prices, allocate markets, engage in product boycotts, and to refuse to deal with third parties are automatically illegal under the antitrust laws. It does not matter what the reason for the agreement might be.

Accordingly, at any association meeting discussions of prices (including elements of prices such as allowances and credit terms), quality ratings of suppliers, and discussions that may cause a competitor to cease purchasing from a particular supplier, or selling to a particular customer, should be avoided. Also, there should be no discussion that might be interpreted as a dividing up of territories.

An antitrust violation does not require proof of a formal agreement. A discussion of a sensitive topic, such as prices, followed by action by those involved or present the discussion is enough to show a price-fixing conspiracy. As a result, those attending an association-sponsored meeting should remember the importance of avoiding not only unlawful activities, but even the appearance of unlawful activity.

# BICSI CODE OF ETHICS

BICSI has established the Ethics Committee, the Code of Ethics and a list of Professional Obligations to reinforce the Code. The Code of Ethics is as follows: **It is important that the BICSI members and credential holders exhibit the highest principles of ethical and professional behavior in the provision of their products and services associated with the information and communications technology (ICT) industry and in their professional interactions associated with BICSI or BICSI events.**

The below listed **Professional Obligations** serve as guidelines to assist members and credential holders to understand the meaning of the Code of Ethics. Adhering to these Professional Obligations will enhance public confidence in the integrity and service of BICSI members and credential holders.

Adherence to the **12 Professional Obligations** is mandatory.

As a BICSI member and/or BICSI credential holder, I have an ethical and professional obligation to the association, ICT industry and its consumers. I therefore, pledge to:

1. Maintain a high standard of professional conduct.
2. Protect and enhance the reputation of the BICSI organization, the credentialing program and any credential held, through my actions.
3. Not misrepresent my BICSI credential(s) nor willingly allow others to represent or use my credential(s).
4. Adhere to all relevant codes, laws, ICT industry standards and BICSI methodologies.
5. Serve all members of the public impartially, providing no substandard service, based on age, race, national origin, color, gender, sexual orientation, disability or religious belief.
6. Refrain from knowingly misrepresenting or misstating any other individual's qualifications, abilities or accomplishments.
7. Respect a client's decision in the selection of competitive services and continue to offer and provide that client with quality services, when requested.
8. Maintain the confidentiality of privileged information entrusted or known to me by virtue of my profession or position in accordance with all applicable laws and/or agreements.
9. Be accurate and truthful in my dealings with clients and not misrepresent the quality, availability or ability of the services I provide.
10. Be accurate, honest and truthful in the presentation of all educational material or in the preparation of material orders and product availability.
11. Provide unbiased, accurate and objective assessments for all safety and operational deficiencies that may be discovered during the performance of my services.
12. Refrain from using false and misleading statements or malicious actions that might injure another person's reputation or bring harm to their person or property.

By signing, I am confirming that I have read the BICSI Code of Ethics and the BICSI Professional Obligations and agree to adhere to them.

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Print name

Signature

Date signed

# BICSI Installer 2, Copper Examination and Credentialing Information

## Experience and Knowledge Requirements

Individuals preparing to sit for the Installer 2, Copper exam must possess at least **one year** of verifiable ICT industry installation experience within the last five years.

Participants sitting for the Installer 2, copper exam must be able to distinguish between different colors, possess manual dexterity to complete fine motor tasks, stand for extended periods of time, climb ladders, and lift and carry items weighing up to 50lbs.

It is strongly recommended that examinees:

- Complete at least 50 hours of independent study of BICSI's *Information Technology Systems Installation Methods Manual (ITSIMM)*
- Attend the IN225: Installer 2, Copper Training course

## Examination Application Process

A complete exam application and a non-refundable application fee must be received by BICSI's Credentialing Department for review and processing no later than five business days prior to the exam date. Exam applications will not be processed after the deadline. After the exam application is approved, it is valid for one year. Go to [bicsi.org](http://bicsi.org) to apply.

## Examination Fees

Application Fee (non-refundable) .....	\$335
Exam Retake Fee (for each part) .....	\$135

Recertification Fee (online) .....	\$130 Member
	\$140 Nonmember
Recertification Fee (paper) .....	\$155 Member
	\$165 Nonmember
Recertification Late Fee (91-120 days) .....	\$95
Recertification Late Fee (121-364 days) .....	\$125

Application fees must be paid before submitting application online. Application prices are listed in U.S. dollars.

## After Passing the Installer 2, Copper Examination

Once you successfully pass both the hands-on and written exam, your credential will be valid for three full years from the date that you passed the last portion of the exam. Within 48 hours of passing the exam, your electronic certificate will be available for you to download from your BICSI profile.

## Suggested Program Advancement

It is recommended that you further your career by advancing to the Installer 2, Optical Fiber and/or Technician credential(s) (dependent upon experience) during the time you are a BICSI Installer 2, Copper. Additional information can be found at [bicsi.org/credentialing](http://bicsi.org/credentialing).

## Examination

The Installer 2, Copper exam is currently based on BICSI's *ITSIMM* and is a two-part exam—hands-on and written. To become a BICSI Installer 2, Copper, you must successfully pass both parts.

### Hands-On Examination

The Installer 2, Copper hands-on exam is given the last day of the IN225 course, which is generally on a Friday afternoon (see course schedule). The hands-on performance exam consists of completing six tasks to industry standards, within a 20-minute per-task time limit. Proctors will give the pass/fail results after each task. If you fail to successfully complete one of the hands-on exam tasks, you will be given the opportunity to retest after each task on the same day at no additional cost. If you fail the same task twice or fail a total of two hands-on tasks, the hands-on exam will need to be retaken on another date.

### Written Examination

The written exam can ONLY be taken after the hands-on exam has been completed successfully. The computer-based exam is two hours in length and consists of 100 questions drawn from BICSI's *ITSIMM*. The exam is multiple choice, with questions based on both knowledge and application.

## Recertification Requirements

In order to maintain your credential, there are required benchmarks to accomplish during each three-year recertification period. The following must be completed and received by the Credentialing Department on or before your credential expiration date:

1. Proof of completion of 15 continuing education credits (CECs)
2. Completed recertification form
3. Recertification Fee

# BICSI Installer 2, Copper Examination Content Outline

BICSI's credentialing programs are a gold standard in the information & communications technology (ICT) industry. The Installer2, Copper credential validates that an installer has mastery of knowledge and skills to perform copper cable installations according to accepted best practices from the ICT cabling installation industry. Every three to five years the Registration and Credentials Supervision Committee (RCSC) oversees a job task analysis (JTA) of this credentialing program to ensure the program is current, relevant and held to the highest standard. Based on this analysis, 11 core competencies were identified as essential to copper cable installation.

The content below outlines the competency areas covered on the Installer 2, Copper exam.

Area of Expertise		% of Exam
A	General Knowledge, Planning and Field Engineering	13-14%
	Demonstrate knowledge of copper cable	
	Interpret blueprints	
	Verify and comply with site safety plan	
	Perform labeling according to a labeling scheme	
	Perform site survey (onsite start-up)	
B	Pathways and Spaces	28-29%
	Build closets, telecom rooms, entrance facilities, equipment rooms and data centers	
	Install grounding infrastructure	
	Install cable support systems	
	Prepare station location—wall	
	Prepare station location—floor	
	Prepare station location—Power Pole/Modular Furniture	
	Install fire stop	
	Install sleeves	
	Install cable trays, ladder racks and continuous cable support systems	
	Install non-continuous cable supports	
	Install surface raceways	
	Install cable supports when cable is under the floor	
	Install poke throughs	
	Install cut-in rings (cavity box)	
C	Pull Cable and Fiber	12-13%
	Perform cable pulling setup	
	Pull horizontal station cable (conduit)	
	Pull horizontal station cable open ceiling	
	Pull backbone—riser from top down	
	Pull backbone—riser from bottom up	
	Pull backbone—horizontal backbone	
D	Terminate Cable	11-12%
	Perform pre-termination functions	
	Install correct connecting hardware for copper terminations	
	Perform copper IDC termination (four pair)	
	Perform coax termination	
E	Performing Splicing	2-3%
	Perform copper splicing	
F	Testing Cable	2-3%
	Perform copper cable testing	
G	Perform Troubleshooting	2-3%
	Perform copper cable troubleshooting	
H	Perform Retrofits	
	Perform site survey (retrofit)	
	Remove abandoned cable	
I	Integration/Convergence	2-3%
	Demonstrate basic knowledge of physical network topologies	
	Demonstrate knowledge of installing wireless systems	
	Demonstrate knowledge of DAS systems	
J	Codes and Standards	8-9%
	Adhere to local, state and federal fire/building codes/standards	
	Demonstrate basic knowledge of NEC, NFPA, ADA and OSHA codes	
	Demonstrate basic knowledge of TIA, ANSI, IEEE and BICSI standards	
K	Data Centers	3-4%
	Install cable for new data centers	
	Demonstrate knowledge of unique layout and configurations of data centers	

# BICSI Cabling Installation Examination Policies



## Reschedule/Cancellation Policy

### Hands-On Testing

If you wish to reschedule or cancel your hands-on exam, you must contact BICSI at least five business days prior to the exam date. Rescheduling or cancelling less than five business days prior to your appointment may result in forfeiting your exam fees. Rescheduling or cancelling requests must be written and submitted to BICSI via email at [credentialing@bicsi.org](mailto:credentialing@bicsi.org).

### Written Testing

If you wish to reschedule or cancel your written exam, you must contact Pearson VUE at least one business day prior to your scheduled appointment. Rescheduling or cancelling less than one full business day prior to your appointment may result in forfeiting your exam fees.

## Examination Retest Policy

For an examinee that needs to retake the exam, there is a 30-day waiting period between each unsuccessful exam attempt. After a third unsuccessful attempt, a 90-day waiting period will begin. You may be allotted additional attempts after the 90-day waiting period if your exam eligibility period is still valid.

Each exam retest requires the appropriate exam retest fee. If you do not pass the exam within your exam eligibility period, you can reapply for the exam by submitting a new application. At that time, you will be required to test on both the hands-on and written exams.

Candidates who are unsuccessful at the written portion of the exam will receive a score report from Pearson VUE when the exam is completed. The score report will reflect a percentage of correct answers in each section of the exam, not an actual score. You are able to access your score report on your Pearson VUE profile at any time, as well.

Examinees can schedule to take their written retest directly on the Pearson VUE website at [pearsonvue.com/bicsi](http://pearsonvue.com/bicsi).

Retake fees will be collected by Pearson VUE when the examinee registers for their exam date. Other currencies are available for retake testing only through Pearson VUE's website. Only credit cards are accepted for exam fees through Pearson VUE.

# General Policies and Procedures

## BICSI Credential's Appeal Process

An appeal made in writing, may be sent to BICSI's RCSC Staff Liaison, within 14 calendar days from the date on the denial notification.

BICSI

**Attn:** RCSC Staff Liaison  
8610 Hidden River Parkway  
Tampa, FL 33637  
[credentialing@bicsi.org](mailto:credentialing@bicsi.org)

When a notification of intent to appeal has been received by the Staff Liaison, the RCSC Appeals Panel will be notified of the intent to appeal. The Staff Liaison will prepare a package of the related data and supporting documents and send to the Appeals Panel, within 7 calendar days.

This Appeals Panel shall reach a decision no later than 30 calendar days from the original receipt of the appeal. During the review of an appeal, should a member of the panel have a conflict of interest, that member must recuse themselves and an alternate will be assigned.

## Appeals Panel

The purpose of the Appeals Panel will be to review the facts of a denied reinstatement of credential(s), denial of a certification exam application or exam challenge and determine if the decision of the original decision was consistent with similar situations, circumstances and/or conditions.

The Appeals Panel has three (3) options:

- Uphold the original decision.
- Amend the original decision backed by further review based on new information.
- Deny the appeal.

Once a decision has been reached by the Appeals Panel, the Staff Liaison will send a decision letter to the person making the appeal. A copy will be placed permanently in the persons' file.