



ISO 9001:2015 Certified

INSPECTION • TESTING • CERTIFICATION

CANDIDATE INFORMATION BULLETIN for CERTIFICATION EXAMINATIONS

✓ S.T.A.R. HVACR Mastery



Table of Contents

I. GENERAL INFORMATION

About NITC
About S.T.A.R. HVACR Mastery Personnel Certification Program
Examination Development
Application Procedures
Examination Fees
Examination Scheduling for Groups
PSI Computer-Based Testing Information
Examination Scores
Examination Site Information
Special Requests for Taking The Examination
NITC No-Show, Cancellation and Refund Policy
Question Comment/Challenge Procedure
Information Release Policy
Appeals Procedure and Complaints
Requirements For Maintaining Certification
Issuance of Wall Certificates and Certification Cards
How to Obtain the NITC Rules and Procedures Document

II. S.T.A.R. HVACR MASTERY

Scope of Work
Examination Qualification Requirements
About The Examination (Content Outline)

III. RE-CERTIFYING YOUR S.T.A.R. HVACR MASTERY CERTIFICATION

Important note to examination candidates:

*The information contained in this document is important.
Please be sure to read it carefully.*



I. GENERAL INFORMATION

STATEMENT OF PURPOSE

The purpose of the NITC Personnel Certification Program is to advance the profession of certain crafts, inspectors and businesses in the construction industry by providing (a) a mechanism by which individuals can demonstrate their knowledge of model codes, standards, industry practices, and (b) a mechanism by which stake holders in the construction industry can readily assess a minimum level of competency for such categories.

NITC is non-discriminatory in accepting applications and issuing certifications to candidates in regards to membership in any trade, association, union, etc., and is in compliance with Federal and State ADA regulations. Since NITC's work is highly important to the construction industry as well as the public at large, NITC understands the importance of impartiality in carrying out its certification activities, manages conflict of interest and ensures the objectivity of its certification activities. For more information see [NITC's Rules and Procedures Manual](#).

ABOUT NITC

National Inspection Testing Certification (NITC) is a third-party provider of certification services to the Piping Industry. We test and certify personnel in the Plumbing, Piping, HVACR and Related Piping Industries. NITC also specializes in Test Development and Test Administration and is ISO 9001:2015 certified and offers a large number of personnel certifications that include but are not limited to Journey and Mastery Levels, Medical Gas and assorted City, County and State Government requirements.

ABOUT OUR S.T.A.R. HVACR MASTERY PERSONNEL CERTIFICATION PROGRAM

For many years the certification of HVACR personnel was voluntary except where required by an employer or by a local jurisdiction. However, new government and industry requires that HVACR systems personnel document their qualifications through written examination and/or practical testing. NITC provides HVACR systems personnel certification which meets the needs of the industry, while holding to the highest standards of modern test practice.

Our S.T.A.R. HVACR Mastery certification program is nationally recognized and is the result of years of effort by experts from the HVACR industry. The subject matter experts who participated in the development our certifications have thousands of hours of experience in their field. The goal of these experts is improving the safety of those who come into contact as either industry workers, or as a consumer.

EXAMINATION DEVELOPMENT

The first step in the development of an objective test is to identify the knowledge necessary for the certification holder. This knowledge was identified by a team of industry experts assembled by NITC and facilitated by staff at the College of Engineering Technology at Ferris State University. The DACUM process of Job and Task Analysis was employed to develop the examination blueprint which became the basis for the content of this examination. The passing scores were also determined by these subject matter experts using psychometrically accepted standard-setting methodology.

APPLICATION PROCEDURES

Candidates must complete an application in advance and return it to the NITC office. In addition to information that verifies eligibility, the application contains a code of conduct that certified persons must abide by and the regulations for suspension or withdrawal of the certification. All fees must be paid before results are released.

Individuals who wish to have their photo appear on their Certification card must submit a photo along with their completed application. There is no additional fee to have a photo appear on a Certification Card as long as the photo is submitted at the time of application, AND it meets the requirement outlined below.+

+ An **uncut** passport size photo may be mailed to the NITC headquarters or a digital photo in bitmap (.bmp) or jpeg (.jpg) format may be submitted via e-mail to photos@nationalitc.com. The photo file must include your full name, and last six digits of social security number or ID number. (example: SS# John Doe 45-6789.bmp or ID# John Doe 123456).

EXAMINATION FEES

For a list of examination fees, please, see our [Certification Examination Price List](#). (All fees due must be submitted with a completed application and all fees must be paid before results are released. (Retest fees for any examination are the same as initial examination fees).

All fees due must be submitted with a completed application and all fees must be paid before results are released.

EXAMINATION SCHEDULING FOR GROUPS

Examinations may be scheduled and administered at specific times, dates and locations as requested by NITC clients. To request an examination for a group of ten (10) or more candidates must submit an examination request form to NITC at least three (3) weeks in advance along with the completed applications. The Instructors name and certification number must be included on the request form.

For groups of less than ten (10) candidates a processing fee will be added. See the [Certification Examination Price List](#). All fees must be paid prior to the examination and processing fees are non-refundable. (See NITC's No-show, Cancellation, and Refund Policy.) It is the responsibility of the instructor or the requesting entity to notify each applicant of the scheduled examination.

Please contact NITC to request additional information about examination scheduling.

COMPUTER-BASED TESTING INFORMATION

Computer-based testing at PSI centers is available for individuals who do not choose to attend the examination scheduled by their training agency at the conclusion of the course. There are more than 340 test center network sites throughout the United States where the certification examination or re-certification examination can be taken on a date, time, and place that is convenient for the candidate. The content of a computer-based multiple-choice examination is identical to that of the pencil and paper multiple-choice examination.

To locate a PSI TESTING center, go to <https://candidate.psiexams.com/testdate/testdate.jsp> or go to www.nationalitc.com. An email address must be included on this form. Login information for scheduling the examination date and time will be provided via email from Tetrac/PSI Registration. **Registration Form will not be processed until payment has been received.**

For any examination scheduled at a PSI testing center, cancellation and rescheduling must be made at least 48 hours prior to the assigned time or date or a rescheduling fee will be assessed.

EXAMINATION SCORES

For computer-based examinations, results are provided to the examinee at the completion of the examination. For NITC-proctored paper-and-pencil examinations results will be sent within 30 days to the training entity or instructor originally arranging the test event.

Important note about NITC pencil paper examinations:

The pencil paper examinations are electronically scored after being returned to the offices of NITC it is important to record all on the scannable answer sheet provided at the testing site. Answers marked in any test booklet will NOT be counted toward a candidate's score.

EXAMINATION SITE INFORMATION

Candidates will be required to sign a test site roster and show photo identification to the proctor at the test site on the day of the examination administration. Acceptable forms of photo identification are a passport, a government-issued driver's license or state ID, or a work identification card with photo. Candidates without appropriate identification documents will NOT be admitted to take the certification examination.

All electronic devices are prohibited. **No PDAs, cellular telephones, or any other types of devices that record or send data are allowed to be used during the examination.**

CLOSED BOOK EXAMINATIONS: It is suggested that examination candidates bring a hand held pencil sharpener and an eraser. No reference books, standards, code books, handbooks, computers, notebooks, audio/visual devices, recorders, illustrated books, notes, drawings or papers of any kind will be allowed in the testing facility.

OPEN BOOK EXAMINATIONS: If you will be taking a computer-based OPEN book examination, writing instruments will not be permitted. Please bring only the permitted references. No handbooks, computers, notebooks, audio/visual devices, recorders, illustrated books, notes, drawings or papers of any kind will be allowed in the testing facility. Remove all extraneous papers from reference books prior to entering the testing facility.

SPECIAL REQUESTS FOR TAKING THE EXAMINATION

Requests for special/emergency examinations will be accommodated by NITC if possible. Candidates who have a disability which restricts their ability to take an examination under the standard conditions may request special testing arrangements. Such requests must accompany the application, and must be received by the normal application closing date. The request must indicate the nature of the disability and the special accommodations needed. Verification by a licensed medical professional is required for both the disability, and the need for special accommodations.

Additional information on special accommodations can be found in Section XVI of the [NITC's Rules and Procedures Manual](#), available for download from our web site at www.nationalitc.com.

NITC NO-SHOW, CANCELLATION and REFUND POLICY

CREDITS: NITC will issue a credit to no shows, cancellations, etc. The credit, redeemable for six months, will be issued to the group or individual for the next available examination. It is the responsibility of the group or individual to keep track of their credit and its expiration date in six months.

Example: A group requested 30 examinations and only 27 candidates showed up. A credit for 3 candidates will be given to the group for the next examination within a six month period.

REFUNDS: Requests for refunds must be received in writing. Refunds will be given only upon approval from the Executive Vice President. Partial refunds will be \$55.00 on the one-hundred question examinations, and 50% of the fee for all other examinations. Full refunds will only be given as a result of uncontrollable events such as severe weather, airline flight cancellations, etc.

Candidates withdrawing or canceling after the deadline, or not sitting for the examination, will forfeit all application fees and will NOT receive a refund.

QUESTION COMMENT/CHALLENGE PROCEDURE

Challenge forms provided by the proctor may be used for both comments and question challenges. At the conclusion of the examination, a candidate may comment on the site, the process, or on any question. Comments and suggestions are always welcome. To challenge a question or questions, a candidate must request the question challenge form from the proctor; complete the form providing as many details as possible. The completed form must be turned in to the proctor before leaving the room. An examinee may file a question challenge at a later time as long as it is in writing, identifies the question being challenged, contains a separate and complete statement of each ground upon which the challenge is based, and is received by NITC not later than 30 days from the receipt of examination score. Additional details on the process are provided in [NITC's Rules and Procedures Manual](#), available at NITC's web site.

INFORMATION RELEASE POLICY

For computer-based examinations, results are provided to the examinee at the completion of the examination. For NITC-proctored paper-and-pencil examinations the results will be provided within 30 days to the examinee, training entity, or to the instructor who originally arranged the test event.

Except as outlined in this section, NITC will NOT release any information regarding a candidate's examination score or application to other entities, including employers and regulatory agencies.

The Name and State of residence of those persons holding a current certification will be posted on the NITC website. This service allows for verification of the status of person's certification. A candidate's personal information will not be included on the NITC website.

APPEALS AND COMPLAINTS PROCEDURE

Candidates may appeal the score of an examination. Appeals shall be filed in writing to the NITC office via U.S. Mail, facsimile, or E-mail no later than thirty (30) days from the date candidate receives the score. Appellants will be notified in writing of the decision by the certification committee.

Any examinee or interested party may file a complaint with NITC for problems that arise which are unrelated to the content of the examination.

The complete procedures for appeals and/or complaints can be found in [NITC's Rules and Procedures Manual](#).

REQUIREMENTS FOR MAINTAINING CERTIFICATION

The initial application for certification with NITC includes a sworn affirmation that the statements made on the application are true. By signing the application each applicant agrees to abide by the terms outlined in the application as well as the rules and regulations for certification holders as set forth by the NITC Certification Committee.

Applicants for certification must understand and agree that falsification of information shall be cause for disqualification and also agree to the following important matters:

- to make no false claims about the scope of any NITC certification(s).
- to avoid engaging in false or misleading advertising of an NITC Certification.
- to avoid utilizing an NITC certification in any manner that portrays NITC unfavorably.
- to avoid utilizing any written documents, reports, procedures, etc., with the NITC certification mark in any manner whatsoever that may be inaccurate or false.
- to notify NITC without delay of any changes in one's capability to fulfill the requirements of their certification.

Applicants understand that NITC reserves the right to suspend or revoke the certification of any applicant or certified person who violates these obligations. Should a certification be revoked, applicants must agree to cease and desist any and all references to being the "holder" of an NITC Certification and must return any certificates, including wallet sized photo identification cards to NITC.

ISSUANCE OF WALL CERTIFICATES AND CERTIFICATION CARDS

Upon successful completion of this certification examination a certificate a wallet id card and a congratulations letter will be issued. This certification is valid for five (5) years from issuance. Certification holders are responsible for keeping their certification current.

NOTE: Certification cards shall be issued without a photo unless a photo ID is supplied along with the completed examination (see above). If a card is issued without a photo, the fee for a duplicate wallet-sized ID card will be required when requesting a new card with a photo.

HOW TO OBTAIN THE NITC RULES AND PROCEDURES DOCUMENT

The Medical Gas Installer Certification is governed by the [NITC's Rules and Procedures Manual](#). This document goes into greater detail on a number of the topics covered in this examination information bulletin. Topics covered include:

- Guidelines for Use of Certification Mark
- Re-issuance of Lost Certification Card
- Issuance of Certification Cards and Wall Certificates
- Proctor Information
- Challenge of Questions and Appeals Procedure

- Conflict of Interest and Confidentiality Statements
- Notification to Certified Personnel and Stakeholders of Updated
- Correction of Material / Technical Error in Examinations
- NITC ADA Policy
- NITC Certification Scheme Committee

Copies of [NITC's Rules and Procedures Manual](#) are available on the NITC website at www.nationalitc.com and also upon request from NITC Headquarters.

II. S.T.A.R. HVACR MASTERY

SCOPE OF WORK: S.T.A.R HVACR MASTERY

A S.T.A.R. HVACR Mastery certification candidate is a qualified individual who can demonstrate mastery of the trade and will be skilled and experienced in operations, planning, blueprint reading, safety, and the practical installation, repair, and service of HVACR systems.

Installation, repair, and service of HVACR systems includes the design, construction, installation, alteration(retrofit), repair, service and maintenance of all boilers, HVAC air handling systems, ductwork systems, refrigeration piping systems, process piping heating and cooling systems in residential, commercial and industrial settings.

A qualified Master Mechanic may perform these tasks alone, or through the supervision of other individuals.

It is expected that the S.T.A.R. HVACR Mastery examination candidate is a technician who has completed a UA training program or equivalent, and/or has five years of experience in the industry.

EXAMINATION QUALIFICATION REQUIREMENTS

Candidates must provide five (5) years of documented work experience installing and servicing HVACR equipment and piping systems, or provide documentation of being in the fifth (5th) year of a HVACR training program involving the installation and servicing of HVACR equipment and piping systems.

ABOUT THE EXAMINATION

The S.T.A.R. HVACR Mastery examination is a closed book examination consisting of two hundred (200) multiple-choice questions. Examinees must answer at least 164 questions (82%) correctly to pass this examination. The subject matter covered in the examination includes Mechanical Principles, Electrical Principles, Controls, Air Conditioning and Refrigeration, Heating, Steam Systems, Ventilation, Piping, Lifting Equipment, Safety and Environmental, Applied Mathematics and Blueprint Reading.

The S.T.A.R. HVACR Mastery examination is comprehensive. It is designed to test the knowledge of the experienced technician. It is not realistic to expect that inexperienced technicians will be able to pass this examination based solely on the information contained in UA textbooks. It is recognized that even the best technician does not work in all areas of the service industry. Further, some knowledge can be forgotten through lack of use. As such, it is recommended that the candidate study a number of UA textbooks in preparing for the S.T.A.R. examination. For those who do not have access to UA training materials; HVACR manuals that are available through industry sources can serve as references for this examination. Please refer

to the list of subject matters covered when identifying appropriate reference materials, manuals, or training guides.

A content outline is provided below as an aid in preparing for the examination.

Examination Name: S.T.A.R. HVACR Mastery Certification Examination
Description: Closed book examination consisting of 200 multiple-choice questions
Passing grade: 82 % (164 correct)
Total time allowed: Two and one half (2 ½) hours

TOPIC	# of Questions	% of Exam
A. Mechanical	21	11%
B. Electrical	16	8%
C. Controls	25	13%
D. Ac & Refrigeration	33	17%
E. Heating	20	10%
F. Hydronics	17	9%
G. Steam System	13	7%
H. Ventilation	17	9%
I. Piping	11	6%
J. Lifting Equipment	4	2%
K. Safety	10	5%
L. Math	7	4%
M. Customer Service	6	3%

An NITC-approved proctor administers the multiple-choice examination. Candidates are notified of a pass or fail result in writing by NITC, the training agency, or by the association that requested the examination.

Candidates failing to achieve a passing score will be eligible for re-examination as soon as the next examination is scheduled. Candidates may re-take their examination at the NITC offices or at a PSI testing center. Re-examination fees are listed in the [Certification Examination Price List](#).

III. RE-CERTIFYING YOUR S.T.A.R. HVACR MASTERY CERTIFICATION

RE-CERTIFICATION

This certification is valid for five (5) years from issuance. Re-certification can be accomplished by successfully passing a fifty (50) question, proctored multiple choice “open book” examination. UA textbook or HVACR manuals that are available through industry sources can serve as references for this examination. Candidates must answer forty (40) of the questions (80%) correctly on the examination to achieve a passing grade. Two (2) hours are allowed for the examination.

The re-certification examination may be taken computer-based at any PSI testing location. Additional Information on locations and how to register will be provided in a recertification letter sent out by NITC approximately three months prior to expiration of the certification.

Paper-based re-certification examinations are available for scheduled groups. Information on how to schedule a group for a proctored examination is contained in this Candidate Bulletin in Section I: “GENERAL INFORMATION” under the heading **“Examination Scheduling for Groups.”**

After examination results are returned to NITC it may take up to 30 days to receive a new card by mail. Contact NITC after 30 days have passed if the new card has not arrived.

Certified individuals who have not renewed their certification within thirty days after the expiration date must begin over by paying the appropriate fee and taking the initial certification examination.

For fees see the [Certification Examination Price List](#)..