

# National Craft Assessment and Certification Program SPECIFICATIONS

## Instrumentation Technician (TINST12)

Version 3, released May 6, 2005, for Instrumentation, 2<sup>nd</sup> edition, released 2003

**Overview** – This written assessment is a two-hour, closed-book examination. You will be permitted to use a nonprogrammable, nonprinting calculator during the examination. The Assessment Center will provide any necessary pencils. No extra papers, books, notes or study material are allowed in the testing area. The Assessment Center will provide a list of any additional material that is approved for reference during the assessment session.

**Study Material** – All NCCER written assessments are referenced to *NCCER Learning Series* modules. You may order modules from Pearson Education Inc. by calling 1.800.922.0579 or by logging on to [www.nccer.org](http://www.nccer.org).

**Assessment Development** – All questions on each assessment have been developed and approved by subject matter experts from the respective craft. Assessment development and administration operates under the direction of Prov, NCCER’s testing partner.

**Credentials** – NCCER will send appropriate credentials (certificate, wallet card, and official transcript) to the Assessment Center upon successful completion of the written assessment. For API assessments, candidates must meet the cut score of each individual topic area within the entire assessment to receive NCCER certification, even if topic area requirements are met for API.

**Training Prescription Reports** – Each candidate will have access to individual results of the written assessment on NCCER’s website. This training prescription will include the overall score and results by topic area.

**Registry** – Assessment results will be maintained in NCCER’s Registry and be a part of each candidate’s training records. These records are stored and become a portable record of your training and assessment achievements.

**Focus Statement** – An instrument fitter lays out, fabricates, installs, and performs leak testing on tubing and piping systems. The fitter also installs instruments, instrument stands, and is able to interpret instrument construction drawings, specifications, and any other resource documents.

The instrument fitter is expected to exhibit basic mechanical and mathematical skills and to demonstrate good safety practices, especially electrical safety.

Module	Topic Area	# of Questions
12102-01	Electrical Safety	4
12105-01	Metallurgy for Instrumentation	4
12107-01	Instrumentation Drawings and Documents, Part 1	4
12108-01	Gaskets and Packing	4
12109-01	Lubricants, Sealants, and Cleaners	4
12110-01	Flow, Pressure, Level, and Temperature	6
12201-03	Craft-Related Mathematics	6
12202-03	Instrumentation Drawings and Documents, Part 2	4
12204-03	Process Control Theory	6
12205-03	Detectors, Secondary Elements, Transducers, and Transmitters	5
12206-03	Controllers, Recorders, and Indicators	4
12207-03	Control Valves, Actuators, Positioners	5
12208-03	Relays and Timers	4
12209-03	Switches and Photoelectric Devices	4
12210-03	Filters, Regulators and Dryers	4
12305-03	Instrumentation Electrical Circuitry	4
12306-03	Grounding and Shielding of Instrumentation Wiring	4
12401-03	Digital Logic Circuits	4
12402-03	Instrument Calibration and Configuration	7
12403-03	Performing Loop Checks	4
12404-03	Troubleshooting and Commissioning a Loop	4
12405-03	Tuning Loops	4
12406-03	Programmable Logic Controllers	4
12407-03	Distributed Control Systems	4
12408-03	Analyzers	4
	<b>Total Number of Questions</b>	<b>111</b>

There are no approved references for this assessment.

The cut score for this assessment is 70%.

This form was last updated February 28, 2008.