

Workforce Florida, Inc. Comprehensive Industry Certification List for the Career and Professional Education Act

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ADDA Drafter Certification AMDDA001

An international program that allows drafters to indicate their knowledge in drafting concepts and internationally recognized standards and practices. American Design Drafting Association (ADDA) developed the examination to elevate an individual's comprehension of the professional standards related to design drafting. Certification enables drafters to demonstrate professional capabilities and helps employers in identifying quality employees. The test does not cover software specific to computer aided drafting or design (CADD). The certification is available to all individuals regardless of experience or formal education. Individuals must pass an exam that covers drafting concepts as well as nationally recognized standards and practices; the exam is 90 minutes and a 75 percent is required to pass.

American Design Drafting Association

www.adda.org

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Aerospace Technician SPACE001

The purpose of a national Aerospace Technician Certification is to formalize the core competences and associated proficiency levels required for successful entry level employment of aerospace technicians who manufacture, assemble, service, test, operate, maintain, or repair systems associated with expendable and reusable space launch vehicles, payloads, related laboratories, and ground support equipment.

An individual must meet at least one of the following verifiable criteria to sit for the exam: have a two year technical college program degree; have/had a two year technical military assignment; hold a FAA Airframe/Powerplant certificate; or have two or more years of on the job training and experience in the Aerospace industry.

The Core exam includes a written portion that is 70 questions, on six topics: Introduction to Aerospace, Applied Mechanics, Basic Electricity, Test & Measurements, Materials and Processes and Aerospace Safety. The exam includes a 16 hour Readiness Course and the three part exam (Written, Oral and Practical).

The American Council on Education has recommended that colleges and universities grant up to 24 credits, in specific areas, toward a technical degree, for successfully passing the three part exam.

National Aerospace Technical Education Center (SpaceTEC)

www.spacetec.org

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Aircraft Electronics Technician (AET) NCATT001

An Avionics Technician deals with the installation, calibration and repair of electronic systems used on aircraft. Aircraft electronics specialists and avionics technicians work closely with the maintenance technicians to keep all aircraft systems operational. This work can take place in an aircraft or in a repair station. The duties include routine electronic maintenance (wiring), troubleshooting or localizing and diagnosing causes of equipment malfunction, replacement of faulty components, tracing circuitry as well as aligning and adjusting repaired equipment. The technician must also be organized in record keeping as each are required to note on forms what is wrong and the particulars about how it was repaired.

The NCATT AET certification examination and certification are open to all technicians regardless of career field, training, education or experience.

Technicians testing for this certification must be able to demonstrate competency in 29 areas, some of which include: basic circuit calculations, theory of operation, power supply circuits, frequency sensitive filters, digital numbering systems, hazard/safety practices, corrosion control, etc. The minimum passing grade for the NCATT AET Certification examination is 70 percent.

National Center for Aircraft Technician

Training (NCATT)

www.ncatt.org

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Autodesk Certified Associate - AutoCAD ADESK016

The Autodesk Certified credential signifies the experience and expertise of design professionals. AutoCAD is the world's leading 2D and 3D CAD application that allows users to design, visualize, and document ideas clearly and efficiently.

The AutoCAD Certified Associate exam is a one-hour on-line examination consisting of 30 questions that assess your knowledge of the tools, features, and common tasks in AutoCAD. The required passing score is 70%. Even though not required, it is recommended the student complete a Autodesk Official Training Courseware (AOTC) or equivalent plus 100 hours of hands-on application before sitting for the exam.

Autodesk

<http://usa.autodesk.com/adsk/servlet/item?siteID=123112&id=10115126>

69

Autodesk Certified Associate - Inventor ADESK019

The Autodesk Certified credential signifies the experience and expertise of design professionals. Autodesk Inventor software provides a comprehensive set of 3D modeling and mechanical design tools for producing, validating, and documenting complete digital prototypes.

The Inventor Certified Associate exam is a one-hour on-line examination consisting of 30 questions that assess your knowledge of the tools, features, and common tasks in Inventor. The required passing score is 73%. Even though not required, it is recommended the student complete a Autodesk Official Training Courseware (AOTC) or equivalent plus 100 hours of hands-on experience before sitting for the exam.

Autodesk

<http://usa.autodesk.com/adsk/servlet/item?siteID=123112&id=10115126>

71

Autodesk Certified Professional – AutoCAD ADESK021

The Autodesk Certified credential signifies the experience and expertise of design professionals. AutoCAD is the world's leading 2D and 3D CAD application that allows users to design, visualize, and document ideas clearly and efficiently.

To earn the credential of AutoCAD Certified Professional, the student must pass a 90-minute performance based test comprised of 20 questions and also pass the AutoCAD Certified Associate exam in any order. The required passing score is 80%. Even though not required, it is recommended that a student complete a Autodesk Official Training Courseware (AOTC) or equivalent plus 400 hours of hands-on application before sitting for the exam.

Autodesk

<http://usa.autodesk.com/adsk/servlet/item?siteID=123112&id=10115126>

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Autodesk Certified Professional - Inventor ADESK024

The Autodesk Certified credential signifies the experience and expertise of design professionals. Autodesk Inventor software provides a comprehensive set of 3D modeling and mechanical design tools for producing, validating, and documenting complete digital prototypes.

To earn the credential of Inventor Certified Professional, the student must pass a 90-minute performance based test comprised of 20 questions and also pass the Inventor Certified Associate exam in any order. The required passing score is 75%. Even though not required, it is recommended that a student complete a Autodesk Official Training Courseware (AOTC) or equivalent plus 400 hours of hands-on application before sitting for the exam.

Autodesk

<http://usa.autodesk.com/adsk/servlet/item?siteID=123112&id=10115126>

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Autodesk Certified User AutoCAD ADESK002

This certification measures one's knowledge of this product. AutoCAD software allows an individual to design, visualize, and document their ideas clearly and efficiently. Autodesk has one goal: increasing productivity.

Autodesk Certification exams are performance-based exams. Each product area requires an individual to take an exam with a two hour limit. The exams each have 12 sections and 35 questions.

Autodesk

<http://usa.autodesk.com/adsk/servlet/item?siteID=123112&id=10115126>

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Autodesk Certified User- Autodesk Inventor ADESK011

This certification measures one's knowledge of this product. Autodesk Inventor software provides a comprehensive set of design tools for producing, validating, and documenting complete digital prototypes.

Autodesk Certification exams are performance-based exams. Each product area requires an individual to take an exam with a two hour limit. The exams each have 12 sections and 35 questions.

Autodesk

<http://usa.autodesk.com/adsk/servlet/item?siteID=123112&id=10115126>

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Avionics Electronics Technician ETAIN006

Avionics Electronics Technicians must be knowledgeable and have functional abilities in the following technical areas: Avionics Systems, Cables and Cabling, Computers and Digital Concepts, Amplifiers, Interfacing, Antennas & Transmission Lines, Components, Mathematics, Network Topologies and Infrastructures, People Relations, Optical Cabling, Safety, Test Equipment & Tools, Satellite Communications, and Troubleshooting.

A technician with two or more years of combined work and electronics training may apply for the Journeyman exam. To be a fully Certified Electronics Technician, an entire certification exam must be passed, which consists of the Associate level exam, plus one of the specialized Journeyman options. This exam deals with advanced practice and theory applicable to the electronics specialty selected. The Journeyman level exam is a two hour exam and the applicant must score at least 75% on both the Associate and the Journeyman exams to pass. A technician who has a valid Associate certification will be required to write only the Journeyman option. Avionics electronics technicians are expected to obtain knowledge of wired and wireless communications basic concepts which are then applicable to various types of avionics systems as they are used in the aeronautics field. It is also highly recommended that the Avionics technician have an FCC General Radio Telephone Operator license.

Electronics Technician Association

www.eta-i.org/CertsGroups.html

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Biomedical Auditor Certification (CBA) AMSFQ002

The Certified Biomedical Auditor is a professional who understands the principles of standards, regulations, directives and guidance for auditing a biomedical system while using various tools and techniques to examine, question, evaluate and report on that system's adequacy and deficiencies.

Five years of on-the-job experience (at least one year must be in a decision-making role) and pass a 4-hour written exam that consists of 135 multiple-choice questions that measures comprehension of the Body of Knowledge (Auditing Fundamentals, Auditing & Inspection Processes, Biomedical Quality Management System Requirements, Technical Biomedical Knowledge, and Quality Tools & Techniques).

American Society for Quality (ASQ)

www.asq.org/store/trainingcertification

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Calibration Technician - CCT AMSFQ003

The Certified Calibration Technician tests, calibrates, maintains and repairs electrical, mechanical, electromechanical, analytical and electronic measuring, recording and indicating instruments and equipment for conformance to established standards.

Five years of on-the-job experience and pass a 4-hour written exam that consists of 125 multiple-choice questions that measures comprehension of the Body of Knowledge (General Metrology, Measurement Systems, Calibration Systems, Applied Mathematics and Statistics, Quality Systems and Standards, and Uncertainty).

American Society for Quality (ASQ)

www.asq.org/store/trainingcertification

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Certified Engineering Technologist (CT) NICET002

The National Institute for Certification in Engineering Technologies (NICET) grants certification to individuals who have met the Institute's standards as established by a committee of experts in the particular practice area.

An individual who has invested the effort to pursue and achieve certification is sought by employers who value demonstrated knowledge, experience, and a sense of professionalism on the part of their employees and contractors. Technologist certification requires a Bachelors Degree in an engineering technology program accredited by the Technology Accreditation Commission of the

Accreditation Board for Engineering and Technology (TAC/ABET). The Associate Engineering Technologist (AT) grade is available upon graduation, while the Certified Engineering Technologist (CT) grade requires at least five years of related work experience after graduation. CT applicants must also submit two endorsements.

National Institute for Certification in Engineering Technologies (NICET)

www.nicet.org

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Certified in Production and Inventory Management (CPIM) TAFOM001

The program is designed to develop specialized knowledge in the very latest production and inventory management techniques and trends, including production planning, materials and capacity requirements planning, just in time, and systems and technologies.

Candidates must pass all five exams for the following modules: Basics of Supply Chain Management; Master Planning of Resources; Detailed Scheduling and Planning; Execution and Control of Operations; and Strategic Management of Resources.

The Association for Operations Management

www.apics.org

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Certified Industrial Maintenance Mechanic INSOC001

Certified Industrial Maintenance Mechanic (CIMM) are responsible for preventive, predictive and corrective maintenance. They perform troubleshooting and analysis, and apply sound maintenance practices in all aspects of their work. CIMMs are multi-skilled individuals whose expertise is primarily mechanical in nature as opposed to instrumentation or electrical. Applicants must meet the following qualifications to be eligible to sit for the CIMM exam: (1) minimum of five years of relevant work experience in the maintenance mechanic field in an industrial setting (or three years experience if the education requirement is met). (2) A two year associate degree in maintenance or related field from an accredited institution or a two year apprenticeship program certified through the U.S. Department of Labor. The CIMM examination is closed book with a 4-hour time limit that covers four major performance domains: maintenance practices; preventive and predictive maintenance; troubleshooting and analysis; corrective maintenance.

Instrument Society of America

www.isa.org

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Certified Manufacturing Technologist (CMfgT) MESME001

This two-volume course will help an individual to prepare for the CMfgE exam at their own pace and convenience. Volume One will introduce an individual to material removal processes: all about turning operations, drilling, milling, and tool life, cost estimating: elements, standards, and optimum cutting speeds and feeds, capacity analysis: workstation and machine utilization, identifying bottlenecks, line balancing: precedence diagram, weight positional approach, and largest set rule, and molding and casting processes. In Volume Two, an individual will learn about metal forming processes: blanking forces and blank sizes, inventory management and scheduling: EOQ, ABC analysis, and master production schedules, as well as evaluating production, schedules, critical ratios, and push vs. pull systems.

Earning the CMfgT demonstrates an individual's competence in the fundamentals of manufacturing. It requires a minimum of four years combined manufacturing-related education and/or work experience. The CMfgT exam takes three hours and consists of 130 multiple choice questions covering subjects including math, applied science, design, materials, manufacturing processes, manufacturing management, manufacturing economics, quality control, computer applications, and automation.

Manufacturing Engineering Certification Institute of the Society of Manufacturing Engineers

www.sme.org

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Certified Plant Supervisor (CPS) AFENG001

Associates for Facilities Engineering (AFE) provides certification, technical information and relevant resources for plant and facility operations and maintenance professionals worldwide. The CPS (Certified Plant Supervisor) review program has been designed for the supervisory professional.

Each of the course instructors will review effective communication skills, how to empower employees and how to enable them to develop the confidence to overcome the daily challenges they face. The program includes interactive sessions with a four hour final exam, through sample questions with instructors.

Associates for Facilities Engineering

www.afe.org

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Certified Purchasing Professional (CPP) APSOC001

The Certified Purchasing Professional (CPP) Certification is for professionals who have demonstrated the skills to successfully implement improved purchasing and supply chain practices as part of a business solution in an organization.

All CPP applicants are required to take and complete the self-running online course "Business Ethics for Buyers and Sellers." A review of their academic achievements, experience and contributions to the purchasing profession is made to award points in each of these categories. A minimum total of 100 points is required for the Certified Purchasing Professional classification. In addition, a three hour written exam is required.

American Purchasing Society

www.american-purchasing.com

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Certified Solidworks Associate (CSWA) SOLID001

Solidworks certifications can be used as a benchmark to measure a person's knowledge and competency with Solidwork mechanical design software. A Certified Solidworks Associate (CSWA) will stand out from the crowd in today's competitive job market. CSWA certification is proof Solidworks expertise and cutting-edge skills that businesses seek out and reward. Candidates must take a 3 hour exam and have a minimum passing grade of 70% in the areas of: sketch entities; sketch tools; sketch relations; boss and cut features; fillets and chamfers; linear, circular and fill patterns; dimensions; feature conditions -start and end; mass properties; materials; inserting components; standard mates; reference geometry; drawing sheets and views; dimensions and model items; annotations; and COSMOXpress.
Dassault Systemes Solidworks Corporation
www.solidworks.com/pages/services/Training/Training.html

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Certified Solidworks Professional (CSWP) SOLID002

A Certified Solidworks Professional is an individual that has successfully passed the advanced skills examination. Each CSWP has proven their ability to design and analyze parametric parts and moveable assemblies using a variety of complex features in Solidworks. Candidates must take a 3 hour exam and have a minimum passing grade of 75% in the areas of Mechanical Design and Design Validation.
Dassault Systemes Solidworks Corporation
www.solidworks.com/pages/services/Training/Training.html

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Certified Welder AWELD001

The Certified Welder program is a performance-based program with no prerequisite courses or certifications required. The Certified Welder (CW) program test to procedures used in the structural steel, petroleum pipelines, sheet metal and chemical refinery welding industries. To pass the required performance based certification examination. An individual must deposit a sound weld that will be inspected by an AWS Certified Welding Inspector (CWI).
American Welding Society
www.aws.org

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Concrete Strength Testing Technician (CSTT) AMCI002

A Concrete Strength Testing Technician is an individual who has demonstrated the knowledge and ability to properly perform, record, and report the results of four basic ASTM laboratory procedures related to the determination of concrete compressive and flexural strength. American Concrete Institute International (ACI) will grant certification only to those applicants who meet both of the following requirements: a passing grade on the ACI written examination; and successful completion of the ACI performance examination. The one-hour written examination is "closed book" and consists of approximately 40 multiple choice questions. There are at least eight questions on each of the ASTM Standards. To pass the written examination, both of the following conditions must be met: at least 60 percent correct for each of the required standards; and a minimum score of 70 percent overall. The performance examination is also "closed book" and requires actual demonstration of the required ASTM Standards. The examinee is judged on his/her ability to correctly perform or describe all of the required procedures for each standard.
American Concrete Institute International
www.aci-int.org

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Electronics Systems Associate (ESA) ISCET002

Open to anyone interested in electronics, including a technician or student. The ESA covers DC, AC, Semi and Digital in 4 parts. Certificates are awarded for passing each of the 4 parts. Once all 4 certificates are earned the Associate Certified Electronics Technician (CET) is awarded. The ESA program offers advantages to the student and the instructors that the Associate level CET program does not offer. ESA certificates are issued for life, but are subject to the Registration requirements. Certificates are awarded for passing each exam of the 4 parts of the ESA program, DC, AC, Semi-conductor and Digital.
International Society of Certified Electronics Technicians
<http://www.iscet.org/certification/index.Html>

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FAA A & P General Exam (Aviation Mechanic General, A&P) FEDAA002

A certificated mechanic may perform or supervise the maintenance, preventive maintenance or alteration of an aircraft but excluding major repairs to and alterations of propellers and/or instruments.

To be eligible for a mechanic certificate a person must be: at least 18 years of age; able to read, write, and speak English; 18 months practical experience with either airframes or power plants, or 30 months of practical experience working on both at the same time or have graduated from an FAA-Approved Aviation Maintenance Technical School; and meet any other requirements as outlined in the appropriate sections of Title 14 of the Code of Federal Regulations (14 CFR part 65) and pass the FAA airman knowledge tests with a minimum passing score of 70 percent.

Federal Aviation Administration

www.faa.gov/education_research/testing/airmen/test_guides

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FAA Airframe Mechanic FEDAA004

Airframe mechanics are authorized to work on any part of the aircraft except the instruments, power plants, and propellers. Combination airframe and powerplant mechanics—called A&P mechanics—work on all parts of the plane except the instruments. Most mechanics working on civilian aircraft today are A&P mechanics. An individual can get the experience to become a certified power plant or airframe mechanic in one of three ways: attend one of the 170 Federal Aviation Regulations (FAR) part 147 Aviation Maintenance Technician Schools nationwide (12 months and 24 months); work an FAA Repair Station or FBO under the supervision of a certified mechanic for 18 months for each certificate, or 30 months for both; or join one of the armed services and get training and experience in aircraft maintenance.

An individual must take oral and practical tests as well as written tests. A Designated Mechanic Examiner gives the oral and practical test. The oral and practical tests cover 43 technical subjects. Typically tests for one certificate- airframe or power plant- takes about 8 hours. There are separate tests for airframe and power plant mechanic certificates, as well as a general test covering both.

Federal Aviation Administration

www.faa.gov/licenses_certificates

201

Facilities Management Certificate (FMC) BOAMI001

This program provides an overview of management information central to operating a facility. It also offers information needed to manage the ongoing operation and maintenance of building systems and to maximize building efficiency and cost-effectiveness. This program aims at commercial property management.

This certificate program requires three core courses: Design, Operation, and Maintenance of Building Systems (Part I); Design, Operation, and Maintenance of Building Systems (Part II); and Fundamentals of Facilities Management. An individual must complete an exam after each course and score at least a 70 percent.

BOMI International (Building Owners and Managers Institute)

www.bomi.org

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Foreign Object Elimination (FOE) NCATT002

FOE - Elements of Basic Awareness addresses twelve industry identified basic knowledge areas, activities and functions designed to prevent foreign objects from entering aviation and aerospace products to eliminate foreign object debris.

Technicians and students preparing for the NCATT Certification exam are required to demonstrate competency in the following standards and outcomes: Basic Terms & Definitions, Housekeeping, Tool Accountability, Hardware Accountability, Lost Items, Physical Entry & Personnel Control, Reporting & Investigating, Material Handling, Parts Protections, Hazardous Materials, Wildlife/Environment, and FOD Effects.

National Center for Aircraft Technician Training

www.ncatt.org

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HACCP Auditor - CHA AMSFQ004

The Certified HACCP Auditor is a professional who understands the standards and principles of auditing a HACCP-based (or process-safety) system. A HACCP Auditor uses various tools and techniques to examine, question, evaluate and report on that system's adequacy and deficiencies. The HACCP Auditor analyzes all elements of the system and reports on how well it adheres to the criteria for management and control of process safety.

Five years of on-the-job experience with at least one year in a decision making role and pass a 4-hour written exam that consists of 135 multiple-choice questions that measures comprehension of the Body of Knowledge (HACCP System, HACCP Principles, Implementation and Maintenance of HACCP System, Auditing Fundamentals, Audit Process, Auditor Competencies, and Quality Tools and Techniques).

American Society for Quality (ASQ)

www.asq.org/store/trainingcertification

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J-STD-001 Certified IPC (Institute of Interconnecting and Packaging Electronic Circuits) Specialist (Soldering Specialist) IPCEI001

The IPC J-STD-001 Requirements for Soldered Electrical and Electronic Assemblies has emerged as the preeminent authority for electronics assembly manufacturing. The standard describes materials, methods and verification criteria for producing high quality soldered interconnections. The standard emphasizes process control and sets industry-consensus requirements for a broad range of electronic products. The training program uses soldering labs and demonstrations as well as classroom instruction to teach the standard criteria. Certified IPC candidates who successfully complete the soldering workmanship portions of the course and the certification examination are given the instructional materials needed for training Application Specialists. The Application Specialists training is "modularized," meaning that training on the entire document is not required. Application Specialists must be trained on the introductory section (8 hours), and then may be trained on other modules covering: wires and terminals, through hole technology, surface mount technology and inspection.

IPC- Association Connecting Electronics Industries

www.ipc.org

220

LabView Certification- The Associate Developer NINSC001

The Associate Developer- is the first step in the certification process for professionals; entry level certification for students; and represents a broad and complete understanding of the core features of the NI products. This certification is designed for professionals and students who wish to demonstrate: a foundational proficiency in the use of NI products and technologies for test and measurement applications; and technical growth in the use of NI products and technologies for their job functions or projects.

Exam Format: Multiple choice and one-hour duration.

National Instruments Corporation

www.ni.com/training

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Lean Certification (Lean Bronze Certification–LBC) SMFEN001

The Lean Bronze Certification (LBC) demonstrates a solid understanding of basic lean principles and tools, and ability in tactical implementation that drives improvement and shows measurable results.

To be eligible for the LBC requires: 2 academic quarters or equivalent of time spent in study of lean; minimum 1 year of industry work experience; minimum 6 months of experience of directly related to Lean implementation (total experience must equal 4 years of combined industry experience, Lean experience and academic study). Candidate must pass a three hour, 150 question exam and complete a portfolio that outlines and documents 5 Lean projects and a summary of those projects.

Society of Manufacturing Engineers, Association for Manufacturing Excellence, and The Shingo Prize for Excellence in Manufacturing

www.sme.org/cgibin/certhtml.pl/?cert/certification.html&&&SME&

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Manager of Quality/Organizational Excellence AMSFQ001

The Certified Manager of Quality/Organizational Excellence is a professional who leads and champions process-improvement initiatives everywhere from small businesses to multinational corporations that can have regional or global focus in a variety of service and industrial settings. A Certified Manager of Quality/Organizational Excellence facilitates and leads team efforts to establish and monitor customer/supplier relations, supports strategic planning and deployment initiatives, and helps develop measurement systems to determine organizational improvement.

An individual must have 10 years of on-the-job experience in one or more of the areas of the Certified Manager of Quality/ Organizational Excellence Body of Knowledge. A minimum of five years of this experience must be in a decision making position, defined as the authority to define, execute or control projects/processes and to be responsible for the outcome.

This may or may not

include management or supervisory positions. The examination is a four-hour, twopart examination–150 multiple choice questions and two constructed response (essay) questions.

American Society for Quality

www.asq.org

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Mastercam Certified Programmer Mill Level 1 (CPgM1)

CNCSI001 The Mastercam Certified Programmer Mill Level 1 (CPgM1) is a rigorous set of practical tests that demonstrate a programmer's ability to work effectively with CAM software, overcome common issues facing today's shops, and produce high quality finished parts. Geared to 2D machining, it ensures a strong foundation in CNC knowledge.

Students enrolled in the Mastercam CAD/CAM program must take a 120 multiple-choice question assessment and pass with a score of 70% or better to evaluate the level of machining knowledge and skills to assist instructors in determining if a student is ready to proceed with Mastercam certification. The CPgM1 certification exam is a practical test and requires the applicant to: (1) Create a 3D wireframe using Mastercam software within 2 hours; (2) Create a CNC program and support information for each setup within 2.5 hours; and (3) Program must be run by Certified Instructor based on criteria to meet certification requirements.

Mastercam

www.mastercam.com

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Medical Laboratory Technician (MLT(ASCP)) AMSCP002

Working under the supervision of the medical technologist an MLT performs routine tests in all areas of the clinical laboratory. An MLT searches for basic clues to the absence, presence, extent of the causes of disease. This skilled individual is responsible for performing laboratory tests efficiently and accurately for high-quality patient care.

An associate degree or at least 60 semester hours (90 quarter hours) of academic credit from a regionally accredited college/university; and option (1): successful completion of a NAACLS accredited MLT program within the last 5 years and courses in biology and chemistry; or option (2): including 6 semester hours (9 quarter hours) of chemistry and 6 semester hours (9 quarter hours) of biology and CLA (ASCP) certification; or option (3): including 6 semester hours (9 quarter hours) of chemistry and 6 semester hours (9 quarter hours) of biology and successful completion of a 50 week U.S. military medical laboratory training course; or option (4): including 6 semester hours (9 quarter hours) of chemistry and 6 semester hours (9 quarter hours) of biology and three years full time acceptable clinical laboratory experience.

American Society of Clinical Pathologists

www.ascp.org

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Medical Laboratory Technician (MLT) AMAOB001

Individuals may be certified as an Medical Laboratory Technician (MLT) in one or more of six technical disciplines: Chemistry; Hematology; Immunology; Immunohematology, Microbiology or Molecular Diagnostics.

To be certified as MLT, an individual must be a high school graduate, or equivalent, pass the appropriate AAB Board of Registry examination, and complete one of the following: Complete a clinical laboratory training program approved or accredited by an organization approved by the U.S. Department of Health and Human Services (HHS); Earn an associate degree (or the equivalent) in a laboratory science, or medical laboratory technology, from an accredited institution; Successfully complete an official U.S. military medical laboratory procedures course of at least fifty (50) weeks duration and earn the military enlisted occupational specialty of Medical Laboratory Specialist (Laboratory Technician); Document five (5) years of full-time clinical laboratory experience (in the applicable technical disciplines) acceptable to the AAB Board of Registry; or Be certified as a POLT(AAB) and obtain four (4) years of acceptable clinical laboratory experience and six (6) continuing education units (CEUs).

American Association of Bioanalysts (AAB)

www.aab.org

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Medical Technologist (MT(AAB)) AMAOB002

Clinical laboratory technologists perform complex chemical, biological, hematological, immunologic, microscopic, and bacteriological tests. Technologists microscopically examine blood and other body fluids. They make cultures of body fluid and tissue samples, to determine the presence of bacteria, fungi, parasites, or other microorganisms. Clinical laboratory technologists analyze samples for chemical content or a chemical reaction and determine concentrations of compounds such as blood glucose and cholesterol levels. They also type and cross match blood samples for transfusions.

Earn an associate degree or an associate of applied science degree, or the equivalent, from an accredited institution with a major in a laboratory science or medical technology. Some individuals may also be required to obtain three years of acceptable full-time experience in the applicable technical disciplines. Individuals who lack three years of acceptable full-time experience may still challenge the MT(AAB) examination. Upon passing the examination, these individuals will be designated medical technologist-provisional [MT-P(AAB)] until they complete three years of acceptable full-time experience in the applicable technical disciplines, at which time the provisional status will be removed.

American Association of Bioanalysts (AAB)

www.aab.org

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Microsoft Dynamics AX MICRO053 This certification helps an individual demonstrate their proficiency in

Microsoft Dynamics AX: a multilingual, multicurrency enterprise resource planning (ERP) solution. With core strengths in manufacturing and e-business, there is an additional strong functionality for the

wholesale and services industries.

An individual must pass a single certification exam. Microsoft Corporation

www.microsoft.com/learning

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MSSC Certified Production Technician (CPT) MSSCN001

The Manufacturing Skill Standards Council (MSSC) is an industry-led training, assessment and certification system focused on the core skills and knowledge needed by the nation's production workers. The MSSC Certified Production Technician (CPT) credential will set the quality standard in our nation's factories.

The credential is awarded to individuals who pass all four Production modules: Safety; Quality Practices & Measurement; Manufacturing Processes & Production; and Maintenance Awareness. The modules are a total of 140 hours full time, intensive. Each assessment contains 125 questions and takes about 90-120 minutes to complete.

The Manufacturing Skill Standards Council (MSSC)

www.msscusa.org

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MSSC Instructor Certification MSSCN006

MSSC offers a three day training course to certify instructors in ways to teach MSSC courses in different learning environments. An instructor's package is provided with the following materials: PowerPoint presentations, facilitator notes, visuals, play maps, unit completion times, optional delivery methods, math problems and answers, and facilitator notes.

MSSC recommends the following criteria for teachers and trainers to be qualified for participation in three-day instructor certification training: Minimum of five years of experience in industrial training or teaching; Bachelors of Science and/or Engineering preferred; Review of MSSC Glencoe/McGraw-Hill text book (High Performance Manufacturing) and course outline prior to training; Good grasp of all four MSSC Course & Assessment Modules: Safety, Quality Practices and Continuous Improvement, Manufacturing Production & Processes, and Maintenance Awareness; Success in passing all four MSSC Modular Assessments, needed to receive an MSSC Production Technician Certificate either before or soon after Instructor Certification Training; and Competent technology/computer skills that permit instructor to use technology tools (e.g. PC, LCD, Overhead Projector, and Internet) in MSSC course delivery.

The Manufacturing Skill Standards Council (MSSC)

www.msscusa.org

282

NCCER Electrical - Level 1 NCCER010

Level One certification: Electrical Safety, Hand Bending, Fasteners and Anchors, Electrical Theory I and II, Electrical Test Equipment, Intro. to the National Electrical Code, Raceways, Boxings, and Fittings, Conductors, Intro. to Blueprints, and Wiring.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

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NCCER Electrical- Level 2 NCCER038

Level Two certification: Alternating Current, Motors, Grounding, Conduit Bending, Boxes and Fittings, Conductor Installations, Cable Tray, Conductor Terminations and Splices, Installation, Circuit Breakers/Fuses, Contractors and Relays, and Electric Lighting.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

284

NCCER Electrical- Level 3 NCCER039

Level Three certification: Load Calculators, Conductor Selection, Overcurrent Protection, Raceway, Box, and Fitting Fill, Wiring Devices, Distribution, Lamps and Components, Motor Calculations/ Maintenance and Control and Hazardous Locations.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

285

NCCER Electrical- Level 4 NCCER040

Level Four certification: Load Calculations, Applications of Lighting, Standby and Emergency Systems, Basic Electronic Theory, and more.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

286

NCCER Electronic Systems Technician- Level 1 NCCER013

Level One- Intro. to the Trade, Construction Materials and Methods, Pathways and Spaces, Fasteners and Anchors, Job Site Safety, Craft Related Math, Hand Bending of Conduit, and Low Voltage Cabling.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

287

NCCER Electronic Systems Technician-Level 2 NCCER041

Level Two- DC / AC Circuits, SemiConductors and Integrated Circuits, Basic Test Equipment, Power Quality and Grounding, Intro. to Electrical Blueprints, Switching Devices and Timers, Wire and Cable Terminations, Intro. to Codes and Standards, Computer Applications, and Advanced Test Equipment.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

288

NCCER Electronic Systems Technician-Level 3 NCCER042

Level Three- Cable Selection, Buses and Networks, Fiber Optics, Video Systems, Wireless Communication, Site Survey and Project Planning, Maintenance and Repair, Intro. Skills for the Crew Leader, and Rack Systems.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

289

NCCER Electronic Systems Technician-Level 4 NCCER043

Level Four- Fire Alarm Systems, Intrusion Detection, Audio Systems, Nurse Call and Signaling Systems, CCTV / Broadband Systems, Access Control, Systems Integration, and Media Management.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

290

NCCER Heating, Ventilation and Air Conditioning (HVAC) - Level 1 NCCER018

Level One- Intro. to HVAC, Trade Mathematics, Copper and Plastic Piping Practices, Soldering and Brazing, Ferrous Metal Piping Practices, Basic Electricity, Intro. to Cooling, Intro to Heating, and Air Distribution Systems.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

291

NCCER Heating, Ventilation and Air Conditioning (HVAC) - Level 2 NCCER081

Level Two- Commercial Airside Systems, Chimneys, Vents, and Flues, Intro. to the Hydronic Systems, Air Quality Equipment, Leak Detection, Evacuation, Recovery and Charging, Alternating Current, Basic Electronics, Intro. to Control Circuit Troubleshooting, Troubleshooting Gas Heating, Troubleshooting Cooling, Heat Pumps, Basic Installation and Maintenance Practices, Sheet Metal Duct Systems, and Fiberglass and Flexible Duct Systems.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

292

NCCER Heating, Ventilation and Air Conditioning (HVAC) - Level 3 NCCER082

Level Three- Planned Maintenance, Troubleshooting Gas Heating, Troubleshooting Electric Heating, Troubleshooting Oil Heating, Troubleshooting Cooling, Troubleshooting Heat Pumps, Troubleshooting Accessories, Troubleshooting Electronic Controls, Hydronic Heating and Cooling Systems, Airside Systems, and Air Properties and Air System Balancing.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

293

NCCER Heating, Ventilation and Air Conditioning (HVAC) - Level 4 NCCER083

Level Four- Construction Drawings and Specifications, Indoor Air Quality, Energy Conservation Equipment, Building Management Systems, Water Treatment, System Startup and Shutdown, Heating and Cooling System Design, and Commercial and Industrial Refrigeration.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

294

NCCER Heavy Equipment Operations - Level 1 NCCER017

Level One- Orientation to the Trade, Heavy Equipment Safety, Identification of Heavy Equipment, Basic Operational Techniques, Tractors, and Grades Part One.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

295

NCCER Heavy Equipment Operations -Level 2 NCCER067

Level Two- Intro to Earthmoving, Dump Trucks, Rollers, Scrapers, Loaders, Forklifts, Excavation Math, Grades Part Two, and Civil Blueprint Reading.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

296

NCCER Heavy Equipment Operations -Level 3 NCCER068

Level Three- Introductory Skills for the Crew Leader, Dozers, Backhoes, Excavators, Motor Graders, Advanced Operational Techniques, Finishing and Grading, and Soils.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

303

NCCER Pipefitting - Level 1 NCCER049

Level One certification - Pipefitting Hand Tools, Power Tools, Ladders and Scaffolds, and Motorized Equipment.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

304

NCCER Pipefitting - Level 2 NCCER050

Level Two certification- Piping Systems, Drawings and Detail Sheets, Pipefitting Trade Math, Pipe Fabrication, and Excavation.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

305

NCCER Pipefitting - Level 3 NCCER051

Level Three certification- Rigging Equipment, Advanced Trade Math, Motorized Equipment II, Field Routing and Vessel Trim, and Testing Piping Systems.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

306

NCCER Pipefitting - Level 4 NCCER052

Level Four certification- Advanced Pipe Fabrication, Performing NDE Testing, Steam Traps, Stress Relieving and Aligning, Maintaining Valves, Hot Taps, and Special Piping.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

307

NCCER Plumbing - Level 1 NCCER026

Level One- Intro to the Plumbing Profession, Plumbing Safety, Plumbing Tools, Intro to Plumbing Math, Intro to Plumbing Drawings, Plastic Pipe and Fittings, Copper Pipe and Fittings, Cast-Iron Pipe and Fittings, Carbon Steel Pipe and Fittings, Corrugated Stainless Steel Tubing, Fixtures and Faucets, Intro to Drain, Waste, and Vent(DWV) Systems, and Intro to Water Distribution Systems.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

308

NCCER Plumbing - Level 2 NCCER069

Level Two- Plumbing Math Two, Reading Commercial Drawings, Hangers, Supports, Structural Penetrations, and Fire Stopping, Installing and Testing DWV Piping, Installing Roof, Floor, and Area Drains, Types of Valves, Installing and Testing Water Supply Piping, Installing Fixtures, Valves, and Faucets, Intro to Electricity, Installing Water Heaters, Fuel Gas Systems, and Servicing of Fixtures, Valves, and Faucets.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

309

NCCER Plumbing - Level 3 NCCER070

Level Three- Applied Math, Sizing Water Supply Piping, Potable Water Treatment, Backflow Preventers, Types of Venting, Sizing DWV and Storm Systems, Sewage Pumps and Sump Pumps, Corrosive-Resistant Waster Piping, and Compressed Air.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

310

NCCER Plumbing - Level 4 NCCER071

Level Four- Business Principles for Plumbers, Introductory Skills for the Crew Leader, Water Pressure Booster and Recirculation Systems, Indirect and Special Waste, Hydronic and Solar Heating Systems, Codes, Servicing Piping Systems, Fixtures, and Appliances, Private Water Supply Well Systems, Private Waste Disposal Systems, Swimming Pools and Hot Tubs, and Plumbing for Mobile Home and Travel Trailer Parks.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

311

NCCER Project Management NCCER027

This management certification covers the following areas: Orientation to the Job; Human Relations; Negotiations; Problem Solving; Construction Documents; Construction Planning; Estimating; Scheduling; Cost Awareness and Control; Resource Control; Quality Control/TQM; and Safety.

89 hours of coursework (divided into 12 separate modules). After each module an individual must take a written test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

316

NCCER Sheet Metal - Level 1 NCCER057

Level One- Intro. to Sheet Metal Trade, Fasteners, Hangers and Supports, Installation of Air Distribution, Insulation, Intro. to Sheet Metal Layout, Trade Math One, and Fabrication One.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

317

NCCER Sheet Metal - Level 2 NCCER058

Level Two: Trade Math Two, Basic Piping Practices, Fabrication Two, Bend Allowances, Blueprints, Air Properties and Distribution, Sheet Metal Duct Fabrication, Soldering, and Fiberglass Duct.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

318

NCCER Sheet Metal - Level 3 NCCER059

Level Three- Trade Math III, Air Systems, Intro. to Welding, Cutting, and Brazing, Principles of Refrigeration/ Airflow, Comprehensive Blueprint and Specific Reading, Fabrication III, and Architectural Sheet Metal.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

319

NCCER Sheet Metal - Level 4 NCCER060

Level Four- Shop Production, Air Balance, Louvers, Dampers and Access Doors, Fume and Exhaust System and Design, Fabrication IV, and Intro. Skills for the Crew Leader.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

320

NCCER Welder - Level 1 NCCER061

Level One- Welding Safety, Oxyfuel Cutting, Base Cutting Preparation, Weld Quality, Groove Welds, Open Root Pipes, Joint Fit-Up and Alignment.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

321

NCCER Welder - Level 2 NCCER062

Level Two- Welding Symbols, Reading Detail Drawings, Stainless Steel Groove and Pipe, Air Carbon Arc Cutting, Plasma Arc Cutting, Equipment and Filler Metals, and Plates.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

322

NCCER Welder - Level 3 NCCER063

Level Three- Heat Treatment, Gas Metal Arc Welding, Flux Cored Arc Welding, and Gas Tungsten Arc Welding.

The CORE: Intro. to Craft Skills certification is required for all NCCER trades. In addition, after each module (of each Level) an individual is required to take a written and performance test.

National Center for Construction Education & Research (NCCER)

www.nccer.org

323

NIMS Certified Machinist NIFMS011

The National Institute for Metalworking Skills (NIMS) is the nation's only ANSI accredited developer of precision manufacturing skill standards and competency assessments. NIMS certifies individual skills against standards and accredits programs that meet its quality requirements. Sheet metal workers make, install, and maintain heating, ventilation, and air-conditioning duct systems; roofs; siding; rain gutters; downspouts; skylights; restaurant equipment; outdoor signs; railroad cars; tailgates; customized precision equipment; and many other products made from metal sheets. They also may work with fiberglass and plastic materials. Skills in the metalworking industry are certified through the earning of NIMS credentials.

The credentials are awarded on satisfactory completion of both performance tests and related theory exams. i.e. There are eight distinct credentials in Machining Level I. There are seven distinct credentials in Metal Stamping Level II. There are a total of 48 credentials in this area; to become a NIMS Certified Machinist, the "apprentice" must earn 12 NIMS credentials.

National Institute for Metalworking Skills (NIMS)

www.nims-skills.org

324

NDT Certificate Electro-magnetic Testing (ET) - Level III ASNTD002

The ASNT Level III program provides third-party certification for NDT and predictive maintenance (PdM) personnel whose specific jobs require appropriate knowledge of the technical principles underlying the tests they perform, witness, monitor, or evaluate.

ASNT Level III applicants must satisfy one of the following eligibility criteria: (1) have graduated from a four-year US college or university with a degree in engineering or science plus one year (12 months) of experience in NDT in an assignment comparable to that of a Level II in the applicable NDT method(s); or (2) have passed at least two years of engineering or physical science study at a university, college, or technical school, plus two years (24 months) of experience; or (3) have four years (48 months) of experience in an assignment at least comparable to that of a Level II in the applicable NDT method(s). ASNT NDT Level III certification candidates are required to pass both the NDT Basic and Method examinations.

The American Society for Non-Destructive Testing (ASNT)

www.asnt.org/certification/certification.Htm

325

NDT Certificate Liquid Penetrant (PT) -Level II ASNTD003

ASNT Central Certification Program(ACCP) Level II shall have the skills and knowledge to set up and calibrate equipment, to conduct tests, and to interpret, evaluate, and document results. ACCP Level II shall be familiar with the scope and limitations of the method to which certified and should be capable of directing the work of trainees and Level I personnel. Be able to organize and report NDT results, capable of developing an NDT instruction in conformance with a procedure, and be knowledgeable in the NDT subject matter contained in the NDT Body of Knowledge for Level II in the applicable test method(s).

To be eligible for examination, Level II candidates must have met minimum training requirements and submit documentation of the hours claimed. Training hours may include both practical and theory courses. Candidates must pass a visual acuity examination no earlier than 12 months before submitting the application. There are four examinations applicants must pass: General Written Examination, Specific Written Examination, Practical Examination, and Instruction Preparation.

The American Society for Non-Destructive Testing (ASNT)

www.asnt.org/certification/certification.htm

326

NDT Certificate Liquid Penetrant (PT) - Level III ASNT004

ACCP Professional Level III shall have the skills and knowledge to establish techniques, to interpret codes, standards, and specifications, to designate the particular technique to be used, and to prepare or approve procedures and instructions. – general familiarity with other NDT methods and capable of conducting or directing the training and examination of NDT personnel in the methods for which the ACCP Professional Level III is qualified. – have knowledge of materials, fabrication, and product technology in order to establish techniques and to assist in establishing acceptance criteria when none are otherwise available. – be knowledgeable in the NDT subject matter contained in the NDT Body of Knowledge for Level III in the applicable test method(s). Level III candidates must satisfy one of the following sets of criteria: (1) have graduated from a four-year US college or university with a degree in engineering or science plus one (1) additional year of experience above the level II requirements in NDT in an assignment comparable to that of an NDT Level II in the applicable NDT method(s); or (2) have passed at least two years of engineering or science study at a university, college, or technical school, plus two(2) additional years of experience above the level II requirements; or (3) have four (4) years of experience above the level II requirements in NDT in an assignment at least comparable to that of an NDT Level II in the applicable NDT method(s). In addition to the prerequisite Level II qualifications and experience, Level III must pass the following four examinations: Basic Examination, Method Examination, Practical Examination, and Procedure Preparation Examination.

The American Society for Non-Destructive Testing (ASNT)

www.asnt.org/certification/certification.htm

327

NDT Certificate Magnetic Particle Testing (MT) - Level II ASNT005

ACCP Level II shall have the skills and knowledge to set up and calibrate equipment, to conduct tests, and to interpret, evaluate, and document results. ACCP Level II shall be familiar with the scope and limitations of the method to which certified and should be capable of directing the work of trainees and Level I personnel. Be able to organize and report NDT results, capable of developing an NDT instruction in conformance with a procedure, and be knowledgeable in the NDT subject matter contained in the NDT Body of Knowledge for Level II in the applicable test method(s).

To be eligible for examination, Level II candidates must have met minimum training requirements and submit documentation of the hours claimed. Training hours may include both practical and theory courses. Candidates must pass a visual acuity examination no earlier than 12 months before submitting the application. There are four examinations applicants must pass: General Written Examination, Specific Written Examination, Practical Examination, and Instruction Preparation.

The American Society for Non-Destructive Testing (ASNT)

www.asnt.org/certification/certification.htm

328

NDT Certificate Magnetic Particle Testing (MT) - Level III ASNT006

ACCP Professional Level III shall have the skills and knowledge to establish

techniques, to interpret codes, standards, and specifications, to designate the particular technique to be used, and to prepare or approve procedures and instructions. – general familiarity with other NDT methods and capable of conducting or directing the training and examination of NDT personnel in the methods for which the ACCP Professional Level III is qualified. – have knowledge of materials, fabrication, and product technology in order to establish techniques and to assist in establishing acceptance criteria when none are otherwise available. – be knowledgeable in the NDT subject matter contained in the NDT Body of Knowledge for Level III in the applicable test method(s). Level III candidates must satisfy one of the following sets of criteria: (1) have graduated from a four-year US college or university with a degree in engineering or science plus one (1) additional year of experience above the level II requirements in NDT in an assignment comparable to that of an NDT Level II in the applicable NDT method(s); or (2) have passed at least two years of engineering or science study at a university, college, or technical school, plus two(2) additional years of experience above the level II requirements; or (3) have four (4) years of experience above the level II requirements in NDT in an assignment at least comparable to that of an NDT Level II in the applicable NDT method(s). In addition to the prerequisite Level II qualifications and experience, Level III must pass the following four examinations: Basic Examination, Method Examination, Practical Examination, and Procedure Preparation Examination.

The American Society for Non-Destructive Testing (ASNT)

www.asnt.org/certification/certification.htm

329

NDT Certificate Radiographic Testing (RT) - Level II ASNDT007

ACCP Level II shall have the skills and knowledge to set up and calibrate equipment, to conduct tests, and to interpret, evaluate, and document results. ACCP Level II shall be familiar with the scope and limitations of the method to which certified and should be capable of directing the work of trainees and Level I personnel. Be able to organize and report NDT results, capable of developing an NDT instruction in conformance with a procedure, and be knowledgeable in the NDT subject matter contained in the NDT Body of Knowledge for Level II in the applicable test method(s).

To be eligible for examination, Level II candidates must have met minimum training requirements and submit documentation of the hours claimed. Training hours may include both practical and theory courses. Candidates must pass a visual acuity examination no earlier than 12 months before submitting the application. There are four examinations applicants must pass: General Written Examination, Specific Written Examination, Practical Examination, and Instruction Preparation.

The American Society for Non-Destructive Testing (ASNT)

www.asnt.org/certification/certification.htm

326

NDT Certificate Liquid Penetrant (PT) -Level III ASNDT004

ACCP Professional Level III shall have the skills and knowledge to establish techniques, to interpret codes, standards, and specifications, to designate the particular technique to be used, and to prepare or approve procedures and instructions. – general familiarity with other NDT methods and capable of conducting or directing the training and examination of NDT personnel in the methods for which the ACCP Professional Level III is qualified. – have

knowledge of materials, fabrication, and product technology in order to establish techniques and to assist in establishing acceptance criteria when none are otherwise available. – be knowledgeable in the NDT subject matter contained in the NDT Body of Knowledge for Level III in the applicable test method(s).

Level III candidates must satisfy one of the following sets of criteria: (1) have graduated from a four-year US college or university with a degree in engineering or science plus one (1) additional year of experience above the level II requirements in NDT in an assignment comparable to that of an NDT Level II in the applicable NDT method(s); or (2) have passed at least two years of engineering or science study at a university, college, or technical school, plus two(2) additional years of experience above the level II requirements; or (3) have four (4) years of experience above the level II requirements in NDT in an assignment at least comparable to that of an NDT Level II in the applicable NDT method(s). In addition to the prerequisite Level II qualifications and experience, Level III must pass the following four examinations: Basic Examination, Method Examination, Practical Examination, and Procedure Preparation Examination.

The American Society for Non-Destructive Testing (ASNT)

www.asnt.org/certification/certification.htm

327

NDT Certificate Magnetic Particle Testing (MT) - Level II ASNT005

ACCP Level II shall have the skills and knowledge to set up and calibrate equipment, to conduct tests, and to interpret, evaluate, and document results. ACCP Level II shall be familiar with the scope and limitations of the method to which certified and should be capable of directing the work of trainees and Level I personnel. Be able to organize and report NDT results, capable of developing an NDT instruction in conformance with a procedure, and be knowledgeable in the NDT subject matter contained in the NDT Body of Knowledge for Level II in the applicable test method(s).

To be eligible for examination, Level II candidates must have met minimum training requirements and submit documentation of the hours claimed. Training hours may include both practical and theory courses. Candidates must pass a visual acuity examination no earlier than 12 months before submitting the application. There are four examinations applicants must pass: General Written Examination, Specific Written Examination, Practical Examination, and Instruction Preparation.

The American Society for Non-Destructive Testing (ASNT)

www.asnt.org/certification/certification.htm

328

NDT Certificate Magnetic Particle Testing (MT) - Level III ASNT006

ACCP Professional Level III shall have the skills and knowledge to establish techniques, to interpret codes, standards, and specifications, to designate the particular technique to be used, and to prepare or approve procedures and instructions. – general familiarity with other NDT methods and capable of conducting or directing the training and examination of NDT personnel in the methods for which the ACCP Professional Level III is qualified. – have knowledge of materials, fabrication, and product technology in order to establish techniques and to assist in establishing acceptance criteria when none are otherwise available. – be knowledgeable in the NDT subject matter contained in the NDT Body of Knowledge for Level III in the applicable test method(s).

Level III candidates must satisfy one of the following sets of criteria: (1) have graduated from

a four-year US college or university with a degree in engineering or science plus one (1) additional year of experience above the level II requirements in NDT in an assignment comparable to that of an NDT Level II in the applicable NDT method(s); or (2) have passed at least two years of engineering or science study at a university, college, or technical school, plus two(2) additional years of experience above the level II requirements; or (3) have four (4) years of experience above the level II requirements in NDT in an assignment at least comparable to that of an NDT Level II in the applicable NDT method(s). In addition to the prerequisite Level II qualifications and experience, Level III must pass the following four examinations: Basic Examination, Method Examination, Practical Examination, and Procedure Preparation Examination.

The American Society for Non-Destructive Testing (ASNT)

www.asnt.org/certification/certification.htm

329

NDT Certificate Radiographic Testing (RT) - Level II ASNT007

ACCP Level II shall have the skills and knowledge to set up and calibrate equipment, to conduct tests, and to interpret, evaluate, and document results. ACCP Level II shall be familiar with the scope and limitations of the method to which certified and should be capable of directing the work of trainees and Level I personnel. Be able to organize and report NDT results, capable of developing an NDT instruction in conformance with a procedure, and be knowledgeable in the NDT subject matter contained in the NDT Body of Knowledge for Level II in the applicable test method(s).

To be eligible for examination, Level II candidates must have met minimum training requirements and submit documentation of the hours claimed. Training hours may include both practical and theory courses. Candidates must pass a visual acuity examination no earlier than 12 months before submitting the application. There are four examinations applicants must pass: General Written Examination, Specific Written Examination, Practical Examination, and Instruction Preparation.

The American Society for Non-Destructive Testing (ASNT)

www.asnt.org/certification/certification.htm

334

NDT Certificate Visual Testing (VT) - Level III ASNT012

ACCP Professional Level III shall have the skills and knowledge to establish techniques, to interpret codes, standards, and specifications, to designate the particular technique to be used, and to prepare or approve procedures and instructions. – general familiarity with other NDT methods and capable of conducting or directing the training and examination of NDT personnel in the methods for which the ACCP Professional Level III is qualified. – have knowledge of materials, fabrication, and product technology in order to establish techniques and to assist in establishing acceptance criteria when none are otherwise available. – be knowledgeable in the NDT subject matter contained in the NDT Body of Knowledge for Level III in the applicable test method(s).

Level III candidates must satisfy one of the following sets of criteria: (1) have graduated from a four-year US college or university with a degree in engineering or science plus one (1) additional year of experience above the level II requirements in NDT in an assignment comparable to that of an NDT Level II in the applicable NDT method(s); or (2) have passed at least two years of engineering or science study at a university, college, or technical school, plus two(2) additional years of experience above the level II requirements; or (3) have four

(4) years of experience above the level II requirements in NDT in an assignment at least comparable to that of an NDT Level II in the applicable NDT method(s). In addition to the prerequisite Level II qualifications and experience, Level III must pass the following four examinations: Basic Examination, Method Examination, Practical Examination, and Procedure Preparation Examination.

The American Society for Non-Destructive Testing (ASNT)

www.asnt.org/certification/certification.htm

336

Operator Certification CSADA001

Operator Certification is an intensive program that educates operators in the correct applications and techniques for safe, competent operation of sawing and drilling equipment.

Successful completion of the CSDA Cutting Edge six-day training program; 4500 hrs field experience; 10-hour OSHA Safety Course; and an unrestricted driver's license.

Concrete Sawing and Drilling Association

www.csda.org

343

Precision Sheetmetal Operator - Level I (PSMO) FMAIN001

FMA's certification program: provides objective evidence of a person's expertise in shearing, sawing, press brake, turret punch press, laser cutting, and mechanical finishing; assists manufacturing organizations in selecting, promoting, and retaining workers; and helps manufacturing organizations improve productivity, quality, and scrap rates.

Applicants must meet the following minimum requirements for certification: one to two years experience as a machine operator; or one to two years of technical training from an accredited program; or successful completion of a one year formally recognized apprenticeship program in precision sheet metal. Pass a 100 question exam covering 13 topic areas:

Metals, Metallurgy, and Metal Working Processes; Paperwork and Documentation; Math Calculations for Sheet Metal Fabrication; Blueprint Reading and Part Layout; Computer/Part Program; Machine Set Up, Functioning, and Operation; Hand Tools; Inspection/Quality Control; Inspection Tools; Tooling/Dies/Jigs/Fixtures; Material and Product Handling; Safety Checks, Equipment, and Procedures; and Preventive Maintenance on Equipment and Tools.

Fabricators & Manufacturers Association, International (FMA)

www.fmanet.org

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Protective Coatings Certification SOPC001

The SSPC Protective Coatings Specialist has the knowledge and experience to: assess industrial coating systems service performance; manage or oversee coating failure analysis; develop coating specifications for new construction and/or maintenance coating; develop industrial painting specifications that address relevant safety and environmental regulations and facility constraints; and evaluate field and shop coating work procedures.

Five years coatings experience and Bachelor's degree; or seven years coatings experience and Associate's degree; or ten years coatings experience and high school graduation or GED. Pass the Fundamentals of Protective Coatings (C-1) course exam and take the Specifying and Managing Protective Coatings Projects (C-2) course and pass the course exam.

Society for Protective Coatings

www.sspc.org

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Quality Engineer -CQE AMSFQ005

The Certified Quality Engineer is a professional who understands the principles of product and service quality evaluation and control.

Eight years of on-the-job experience with a minimum of three years in a decisionmaking position and pass a five-hour written exam that consists of 160 multiple choice questions that measures the comprehension of the Body of Knowledge (Management and Leadership, The Quality System, Product and Process Design, Product and Process Control, Continuous Improvement, and Quantitative Methods and Tools).

American Society for Quality (ASQ)

www.asq.org/store/trainingcertification

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Quality Improvement Associate - CQIA AMSFQ006

The Certified Quality Improvement Associate has a basic knowledge of quality tools and their uses and is involved in quality improvement projects.

Two years of work experience or an associate degree and pass a three-hour written exam that consists of 100 multiple-choice questions that measure the comprehension of the Body of Knowledge (Quality Basics, Teams, and Continuous Improvement).

American Society for Quality (ASQ)

www.asq.org/store/trainingcertification

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Quality Inspector - CQI AMSFQ007

The Certified Quality Inspector, in support of and under the direction of quality engineers, supervisors, or technicians, evaluates hardware documentation, performs laboratory procedures, inspects products, measures process performance, records data and prepares formal reports.

Two years of on-the-job experience in mechanical inspection or a related field; a high school diploma or GED, or an additional three years of related on-the-job experience. Pass a four-hour written exam that consists of 100 multiple-choice questions that measure the comprehension of the Body of Knowledge (Technical Mathematics, Metrology, Inspection and Test and Quality Assurance).

American Society for Quality (ASQ)

www.asq.org/store/trainingcertification

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Quality Process Analyst - CQPA AMSFQ008

The Certified Quality Process Analyst is a paraprofessional, in support of and under the direction of quality engineers or supervisors, analyzes and solves quality problems and is involved in quality improvement projects.

Two years of work experience or an associate degree and pass a four-hour written exam that consists of 100 multiple-choice questions that measure the comprehension of the Body of Knowledge (Quality Basics, Problem Solving and Improvement, Data Analysis, and Customer-Supplier Relations).

American Society for Quality (ASQ)

www.asq.org/store/trainingcertification

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Quality Technician - CQT AMSFQ009

The Certified Quality Technician is a paraprofessional, in support of and under the direction of quality engineers or supervisors, analyzes and solves quality problems, prepares inspection plans and instructions, selects sampling plan applications, prepares procedures, trains inspectors, performs audits, analyzes quality costs and other quality data, and applies fundamental statistical methods for process control.

At least four years of higher education and/or work experience and pass a four-hour written exam that consists of 100 multiple-choice questions that measure the comprehension of the Body of Knowledge (Quality Concepts and Tools, Statistical Techniques, Metrology and Calibration, Inspection and Test, Quality Audits, and Preventive and Corrective Action).

American Society for Quality (ASQ)

www.asq.org/store/trainingcertification

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Radar Electronics Technician (RAD) ETAIN007

Radar electronics technicians are expected to obtain knowledge of radar basics and concepts which are applicable to all of the various types of avionics, maritime and land Radar systems.

A technician with two or more years of combined work and electronics training may apply for the Journeyman exam. To be a fully Certified Electronics Technician, an entire certification exam must be passed, which consists of the Associate level exam, plus one of the specialized Journeyman options. This exam deals with advanced practice and theory applicable to the electronics specialty selected. The Journeyman level exam is a two hour exam and the applicant must score at least 75% on both the Associate and the Journeyman exams to pass. A technician who has a valid Associate certification will be required to write only the Journeyman option.

Electronics Technician Association

www.eta-i.org/CertsGroups.html

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Reliability Engineer - CRE AMSFQ010

The Certified Reliability Engineer is a professional who understands the principles of performance evaluation and prediction to improve product/systems safety, reliability and maintainability.

Eight years of on-the-job experience with a minimum of three years in a decisionmaking position and pass a four-hour written exam that consists of 150 multiple-choice questions that measures the comprehension of the Body of Knowledge (Reliability Management, Probability and Statistics for Reliability, Reliability in Design and Development, Reliability Modeling and Predictions, Reliability Testing, Maintainability and Availability, and Data Collection and Use).

American Society for Quality (ASQ)

www.asq.org/store/trainingcertification

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Siemens (Level I) Mechatronic Systems Assistant SIEME001

The Mechatronic Systems Assistant certification is the first of three certifications in a series. A Siemens Certified Mechatronic Systems Assistant functions as a well-grounded machine operator in a complex system, with responsibility for efficient operation of the equipment with minimal down-times. Normally a Siemens Certified Mechatronic Systems Assistant would carry out their work at plant assembly sites, workshops or in connections with service operation which utilize complex mechatronic systems.

Level 1 (Assistant) Certification consists of four standardized courses- Electrical Components; Mechanical Components and Electrical Drives; (Electro)Pneumatic and Hydraulic Control Circuits; and Digital Fundamentals and PLCs- designed to be integrated within a college curriculum or to be implemented as continuing education. Each course consists of roughly 64 hours of classroom instruction with additional laboratory work on a physical system located at the training institution, on PC and web-based simulations, etc. After the four courses have been successfully completed the student must pass the final examination.

SIEMENS AG

www.siemens-certifications.com

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Six Sigma Black Belt - CSSBB AMSFQ011

The Certified Six Sigma Black Belt is a professional who can explain Six Sigma philosophies and principles, including supporting systems and tools. A Black Belt should demonstrate team leadership, understand team dynamics and assign team member roles and responsibilities.

Requires two completed projects with signed affidavits or one completed project with signed affidavit and three years of work experience. Pass a four-hour written exam that consists of 150 multiple-choice questions that measure the comprehension of the Body of Knowledge (Enterprise-Wide Deployment, Organizational Process Management and Measures, Team Management, Define, Measure, Analyze, Improve, Control, and Design for Six Sigma(DFSS) Frameworks and Methodologies).

American Society for Quality (ASQ)

www.asq.org/store/trainingcertification

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Six Sigma Green Belt - CSSGB AMSFQ012

The Six Sigma Green Belt operates in support of or under the supervision of a Six Sigma Black Belt, analyzes and solves quality problems and is involved in quality improvement projects.

Three years of work experience and pass a four-hour written exam that consists of 100 multiple choice questions that measure the comprehension of the Body of Knowledge (Overview: Six Sigma and the Organization, Six Sigma - Define, Six Sigma-Measure, Six Sigma-Analyze, and Six Sigma - Improve & Control).

American Society for Quality (ASQ)

www.asq.org/store/trainingcertification

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Truck Driver Certification PROTD001

Professional Truck Driver Institute (PTDI) developed the first industry recognized voluntary certification standards for school entry-level truck driver training courses, carrier driver finishing programs and younger driver programs. The standards include skill, curriculum and course/program standards.

Skill standards require that drivers complete several assessment criteria. Individuals must maintain and record hours of service requirements - see the Federal Motor Carrier Regulations, Part 395. PTDI requires a minimum of 104 hours in a classroom and lab setting combined. PTDI requires a minimum of 44 hours behind-the-wheel (BTW) time per student, with at least 12 hours on the range, 12 hours on the road, and 20 hours split whichever way the school decides.

Professional Truck Driver Institute (PTDI)

www.ptdi.org