SpaceTEC Partners, Inc.

Certification Catalog

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About SPI

History

Beginning as a National Science Foundation Advanced Technological Education grant supporting aerospace technical education in 2002, SpaceTEC has distributed more than $10M in grant funding over the past 15 years throughout the aerospace and aviation education communities building a robust educational and credentialing resource.

SpaceTEC Partners, Inc. (SPI) was formed in 2009 to manage activities directly or indirectly related to aerospace technician credentialing. SPI was formally recognized as a 501c3 educational non-profit corporation by the US Internal Revenue Service in 2016.

SPI is authorized by the FAA Office of Commercial Space to support the nation's space industry through development of curriculum and performance-based certifications for technicians engaged in space vehicle manufacturing and operations.

Cert*TEC* was created by SPI in 2010 to deliver credentials assessing relevant skills and competencies desired in prospective employees throughout aviation, aerospace and related industries nationwide.

Credential Testing Services (CTS) was formed in 2016 to provide accredited non-performance-based certification and third-party computer-based testing services.

SPI programs support commercial space, aviation manufacturing, maintenance and operations, the military and many advanced manufacturing technology education centers across the country with program outcome and student skills validation.

Accreditation

SPI's programs provide industry-driven, nationally recognized credentials reflecting competencies employers demand for aerospace technicians seeking employment in the aerospace and aviation industries. SPI's certification process is accredited by the International Certification Accreditation Council (ICAC). ICAC is an alliance of organizations dedicated to assuring competency, professional management, and service to the public by encouraging and setting standards for licensing, certification, and credentialing programs.

SPI Examination Process

- All written exams have 70—100 questions, selected randomly from SPI's examination question banks. 70% (or higher in some cases) score is required to pass.
- For performance-based exams, an oral exam on any topics scored less than 70% on the written exam is required. Minimum of 5 of 7 questions from each topic must be answered correctly (70%).
- Practical "hands-on" exercise for each exam topic are performed using a Student Reference Manual with task instructions. Each is scored using a standardized rubric with 70% on each exercise required to pass.

Standardized Practical Testing

- Practical testing is administered using common aerospace processes, tools, and materials.
- If exam materials are not available at testing sites, exam kits can be sent to testing locations.
- Kits are pre-staged at many locations across the country.

Examination Delivery

- Testing is through SPI's cloud-based Examination Management System (EMS).
- Test takers register online; payment can be through PayPal, an invoicing system, or a pre-paid voucher system.
- All exams are proctored and test takers receive immediate feedback upon completion.
- Test proctors may also elect to receive blind Coaching Reports with topic scores if necessary.

Proctoring

- Relationship established through a signed SPI Proctor Agreement.
- Written Proctor Guide and Proctor orientation teleconference on test requirements.

Certified Testing Centers

- Industry-driven technician performance standards translate to higher levels of productivity, safety, and dependability.
- SPI examinations provide professional development opportunities and recognition for technicians through nationally-recognized certifications.
- SPI Testing Center Approval follows a review of education and training programs, an important component in ensuring comprehensive and current standards are met.

STE/CTE Examiners

- Candidates wishing to become SpaceTEC or Cert*TEC* Examiners must first pass the certification examinations.
- They must then complete an application form and undergo Examiner training.
- Once accepted, Examiners are issued configuration-controlled Examiner manuals.
- A series of exams are conducted under the supervision of an experienced Examiner.
- Recurrent training is required if Examiners have not conducted exams in the preceding year.

Credential Testing Services

- A division of SPI, Credential Testing Services (CTS), offers computer-based examination administration for a variety of professional applications.
- Powered by Questionmark, SPI's cloud-based, scalable assessment management system.
- Offering ASTM/NCATT knowledge-based certifications, third party end-of-course testing, instructor professional development.

ASTM International

- Development and administration of all ASTM/NCATT credentials is managed by SpaceTEC Partners, Inc.
- In 2014, ASTM International absorbed NCATT, the National Center for Aerospace and Transportation Technologies "to provide non-regulatory, industry-recognized personnel certifications for aviation and aerospace technicians".
- In 2017, ASTM International entered into a contractual agreement with SPI and its Credential Testing Services division "to work jointly to help certify aircraft maintenance technicians and other aerospace workers".
- Under the agreement, SPI will manage all NCATT written exams. Separately, SPI will continue to offer its own job-oriented, practical performance-based certification examinations.
- Additionally, SPI is transitioning of all its certification standards to ASTM International for inclusion in their full consensus standards process.

SpaceTEC Certification Products

Certified Aerospace Technician® Certifications

The SpaceTEC Certified Aerospace Technician examination process offers certification in two categories:

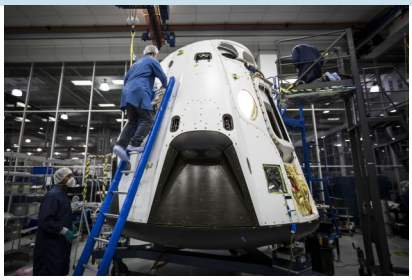
1. A Core certification for entry-level employees covering general knowledge in six areas: Introduction to Aerospace, Applied Mechanics, Basic Electricity, Test & Measurements, Materials and Processes, and Aerospace Safety; and
2. Endorsements for advanced standing in one of the following three areas: Aerospace Vehicle Processing; Aerospace Manufacturing; Aerospace Composites.

Qualifications

You must meet at least one of the following verifiable criteria to sit for the exam:

1. You have a 2 year technical college program degree
2. You have/had a two year technical military assignment
3. You hold a FAA Airframe/Powerplant certificate
4. You have two or more years of on the job training and experience in the Aerospace industry
5. Endorsements require a Core certification

Core Certification



The Core exam is a three part exam consisting of a 70 question, computer-based written exam, followed by an oral and practical evaluation of an individual's technical knowledge and skills. The certification includes an optional Prep Course, pre-test, and the three part exam (Written, Oral, and Practical)[1]

Exam Information

Price:	$500
Certification Term:	3 Year
Hands-On Required:	Yes
Questions on Exam:	70
Passing Score:	67%
Time Limit:	90 min

Certified Aerospace Technician Endorsements

- Aerospace Manufacturing Essentials
- Aerospace Structures and Assembly Processes
- Aerospace CNC & Manual Machining Processes
- Aerospace Welding & Cutting Processes
- Composites
- Spacecraft Launch Processing

Exam Information

Price:	$500 ea.
Certification Term:	3 Year
Hands-On Required:	Yes
Questions on Exam:	70
Passing Score:	67%
Time Limit:	90 min

Cert*TEC* Certification Products

Aerospace Coatings Application Specialist (ACAS)	Exam Information
♦ SPI has partnered with experts in the field of Aerospace Coatings Application to develop a certification program for aircraft paint personnel which conforms to the recently published SAE specification AS7489. This certification series follows Aerospace Coatings Specialist 1—General and demonstrates the ability to successfully and consistently perform a broad spectrum of aerospace coatings tasks to achieve the desired engineering purposes.	Price: $175 Certification Term: N/A Hands-On Required: Yes Questions on Exam: 100 Passing Score: 70% Time Limit: 120 min

Aviation Mechanical Assembly	Exam Information
♦ The Aviation Mechanical Assembly certification is a comprehensive assessment of technician skills and knowledge focused on Introduction to Aviation, Blueprint Reading, Precision Instruments, Power Island & Hand Tools, Fasteners & Fastener Installation Inspection, Drilling & Riveting, Sealing Application & Sealing Safety, and Electrical Bonding & Grounding. This certification is closely aligned with the curriculum taught at the National Aviation Consortium (NAC) centers and specifically the National Center for Aviation Training (NCAT).	Price: $400 Certification Term: 3 Years Hands-On Required: Yes Questions on Exam: 80 Passing Score: 70% Time Limit: 90 min

Cert*TEC* Certification Products

Aviation Structures

- The Aviation Structures certification is a comprehensive assessment of technician skills and knowledge focused on structures knowledge, fabrication methods, health and safety, inspection and repair, and regulations and documentation.

Exam Information

Price:	$400
Certification Term:	3 Years
Hands-On Required:	Yes
Questions on Exam:	77
Passing Score:	70%
Time Limit:	90 min

Aviation Structures Level 2

- The Aviation Structures Level 2 certification demonstrates advanced skills in all facets of aircraft sheet metal and structures repairs, including interpreting technical manuals, engineering drawings, blueprints and schematics; planning, lay-out, fabrication and installation of modifications; conducting inspections, performing corrosion repairs; and assembly and installation of replacement parts to include final operational checks.
- Qualification: 3 years minimum documented experience in aircraft sheet metal and structures fabrication, repair, maintenance, and modification.

Exam Information

Price:	$450
Certification Term:	3 Years
Hands-On Required:	Yes
Questions on Exam:	100
Passing Score:	70%
Time Limit:	120 min

Cert*TEC* Certification Products

Avionics[9,15]

- The Avionics certification meets employers' needs while following guidelines of the world's only widely-recognized Avionics authority—the European Aviation Safety Agency (EASA). Upon successful completion of a well-defined web-based training program provided through Nida Corporation and in-class instruction supported by Aircraft Technical Book Company manuals and materials, students are eligible to take a written exam at the conclusion of applicable modules and practical examinations once all written exams are complete for Cert*TEC* Avionics Technician certification. The Cert*TEC* written and practical exams are administered in concert with Nida Corporation student trainers and this same system is available to organizations wishing to become Cert*TEC* testing centers.

Exam Information

Price:	$65 each[14,16]
Certification Term:	3 Years
Hands-On Required:	Yes
Questions on Exam:	50-100
Passing Score:	70%
Time Limit:	TBD

Basic Composites

- The Basic Composites certification is a comprehensive assessment of technician skills and knowledge focused on composite history, fiber reinforcements, matrix systems, and processes related to basic composite fabrication, inspection, damage assessment and repair using methods common to industry.
- Applicants will be required to complete a written examination and demonstrate the ability to properly apply composites construction techniques using appropriate materials and tooling to produce composite components, perform material evaluation techniques, and perform composite repairs as directed by a qualified Cert*TEC* examiner.

Exam Information

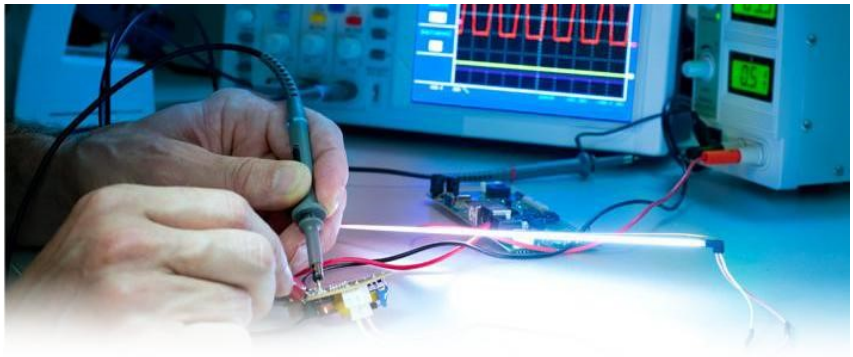
Price:	$400
Certification Term:	3 Years
Hands-On Required:	Yes
Questions on Exam:	70
Passing Score:	70%
Time Limit:	90 min

Cert*TEC* Certification Products

Basic Electricity and Electronics (BEE)[2]	Exam Information

- The Basic Electricity and Electronics (BEE) certification challenges the candidate to demonstrate their skills and knowledge in measuring, analyzing, and troubleshooting DC, AC, Analog and Digital electronic circuits. The candidates are presented live electronic circuits that emulate circuits found in industrial applications. Each circuit is capable of providing numerous scenarios, signal levels, and faulted conditions. Successful candidates correctly measure electronic parameters at various test points, follow normal circuit signal flow, and identify faults as they are presented in the circuit. Each discipline utilizes 2 assessment circuit cards. A trainer base unit, common to all the assessment circuit cards, provides power, circuit protection, and non-destructive faulting to the circuit cards.
- The BEE consists of 4 individual certifications focusing on basic electricity and electronics fundamentals in the following four subject areas: DC, AC, Analog, and Digital.

Price:	$85
Certification Term:	3 Years
Hands-On Required:	Yes
Questions on Exam:	50
Passing Score:	70%
Time Limit:	60 min



Cert*TEC* Certification Products

Advanced Electricity and Electronics (AEE)[3]

- The Advanced Electricity and Electronics (AEE) certification challenges the candidate to demonstrate their skills and knowledge in measuring, analyzing, and troubleshooting DC, AC, analog and digital electronic circuits. The candidates are presented live electronic circuits that emulate circuits found in industrial applications. Each circuit is capable of providing numerous scenarios, signal levels, and faulted conditions. Successful candidates correctly measure electronic parameters at various test points, follow normal circuit signal flow, and identify faults as they are presented in the circuit. Each discipline utilizes three assessment circuit cards that offer progressively more complex circuits as the candidate progresses from the beginning of the assessment to the end. A trainer base unit, common to all the assessment circuit cards, provides power, circuit protection, and non-destructive faulting to the circuit cards.
- The AEE consists of 4 individual certifications focusing on basic electricity and electronics fundamentals in the following four subject areas: DC[5], AC[4], Analog[6], and Digital[7]

Exam Information

Price:	$125
Certification Term:	3 Year
Hands-On Required:	Yes
Questions on Exam:	50
Passing Score:	70%
Time Limit:	90 min

Credential Testing Services Certification Products

Nida Corporation Avionics Computer-based Training[13]	Exam Information	
♦ Basic Electricity for Avionics—AV1 CBT Exam[14]	Price:	$34.99
♦ Basic Electronics for Avionics—AV2 CBT Exam[14]	Price:	$34.99
♦ Analog for Avionics—AV3 CBT Exam[14]	Price:	$34.99
♦ Digital for Avionics—AV4 CBT Exam[14]	Price:	$34.99

ASI	Exam Information	
♦ Fully customizable Aptitude and Skills Inventory (ASI)	Price:	$29.99

ASTM Certification Products

Business Aviation Cabin Crew	Exam Information	
♦ The Business Aviation Cabin Crew certification challenges the candidate to demonstrate their knowledge of and skills in aircraft safety procedures, as well as professionalism, discretion and cabin service safety that exceeds regulatory requirements, for ensuring the comfort and safety of both domestic and international passengers.	Price:	$175
	Hands-On Required:	No
	Questions on Exam:	170
	Passing Score:	78%
	Time Limit:	4 hours

Health and Safety in Nanotechnology	Exam Information	
♦ The Health and Safety in Nanotechnology certificate is the first in a series of industry-endorsed stackable credentials providing basic skill set standards for education and workforce development in nanotechnology based on ASTM E2996 – Standard Guide for Workforce Education in Nanotechnology. ♦ This certificate provides employers with a basis for evaluating knowledge and qualifications of current and future employees, thereby allowing certificate holders to differentiate themselves from others in their profession and to advance their careers.	Price:	$65
	Hands-On Required:	No
	Questions on Exam:	50
	Passing Score:	70%
	Time Limit:	1 hour

ASTM NCATT Certification Products

Aircraft Electronics Technician (AET)[12]	Exam Information	
	Price:	$125
	Hands-On Required:	No
	Questions on Exam:	75
	Passing Score:	70%
	Time Limit:	2 hours

AET Endorsements[12]	Exam Information	
♦ Autonomous Navigation Systems (ANS) ♦ Dependent Navigation Systems (DNS) ♦ Onboard Communication & Safety Systems (OCS) ♦ Radio Communication Systems (RCS)	Price:	$110 each
	Hands-On Required:	No
	Questions on Exam:	50
	Passing Score:	70%
	Time Limit:	1 hour

Note: Candidate must first pass the AET to become eligible to sit for one of the AET endorsements

Foreign Object Elimination (FOE)	Exam Information	
	Price:	$110
	Hands-On Required:	No
	Questions on Exam:	50
	Passing Score:	80%
	Time Limit:	1 hour

Aerospace Aircraft Assembly (AAA)	Exam Information	
	Price:	$125
	Hands-On Required:	No
	Questions on Exam:	100
	Passing Score:	70%
	Time Limit:	2 hours

Unmanned Aircraft System Maintenance (UAS)	Exam Information	
	Price:	$200
	Hands-On Required:	No
	Questions on Exam:	150
	Passing Score:	70%
	Time Limit:	3 hours

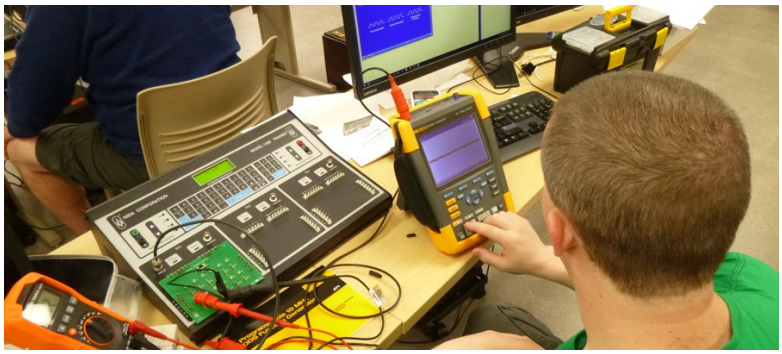
ASTM/Cert*TEC* Certification Products

Aircraft Electronics Technician (AET) Practical Skills Certificate[10]

- The Cert*TEC* AET Practical Skills Certificate is the only Avionics practical skills assessment available today. It meets ASTM International's F3245-17 Standard Guide for Aircraft Electronics Technician standard practical skills requirements and is closely-aligned with the European Aviation Safety Agency's (EASA) Part-66 B2 practical testing requirements.
- The Cert*TEC* AET Practical Skills Certificate challenges the candidate to demonstrate their skills and knowledge in measuring, analyzing, and troubleshooting Avionics systems and equipment.
- The Cert*TEC* Avionics performance assessment is segmented into four distinct sections; 1) DC and AC Electricity, 2) A/D and D/A Conversion, 3) Connector Troubleshooting and 4) Aircraft Systems. The four sections must be challenged all at one time.

Exam Information

Price:	$175
Hands-On Required:	Yes
Passing Score:	70%
Time Limit:	4 hours



ASTM/Cert*TEC* Certification Products

Aircraft Electrician—Electrical Wiring Interconnection System (AE-EWIS) Technician Practical Skills Certificate[11]

- The Cert*TEC* AE-EWIS Practical Skills Certificate meets ASTM International's F3245-17 Standard Guide for Aircraft Electronics Technician standard practical skills requirements and is closely-aligned with the European Aviation Safety Agency's (EASA) Part-66 B2 practical testing requirements.
- Cert*TEC* AE-EWIS challenges technicians to demonstrate the ability to interpret engineering drawing symbols, flags, and general notes, use standard tools and equipment to build an aircraft electrical system, and test for conformance to specifications by ensuring signal flow throughout the system.
- Cert*TEC* AE-EWIS also challenges technicians to demonstrate the ability to assemble wire harnesses by cutting, stripping and insulating wire with heat shrink tubing; attaching wires to fixtures and accessories such as circuit breakers, switches and terminal strips; crimping pins, soldering sockets and turrets; routing harnesses properly and mating connectors.

Exam Information

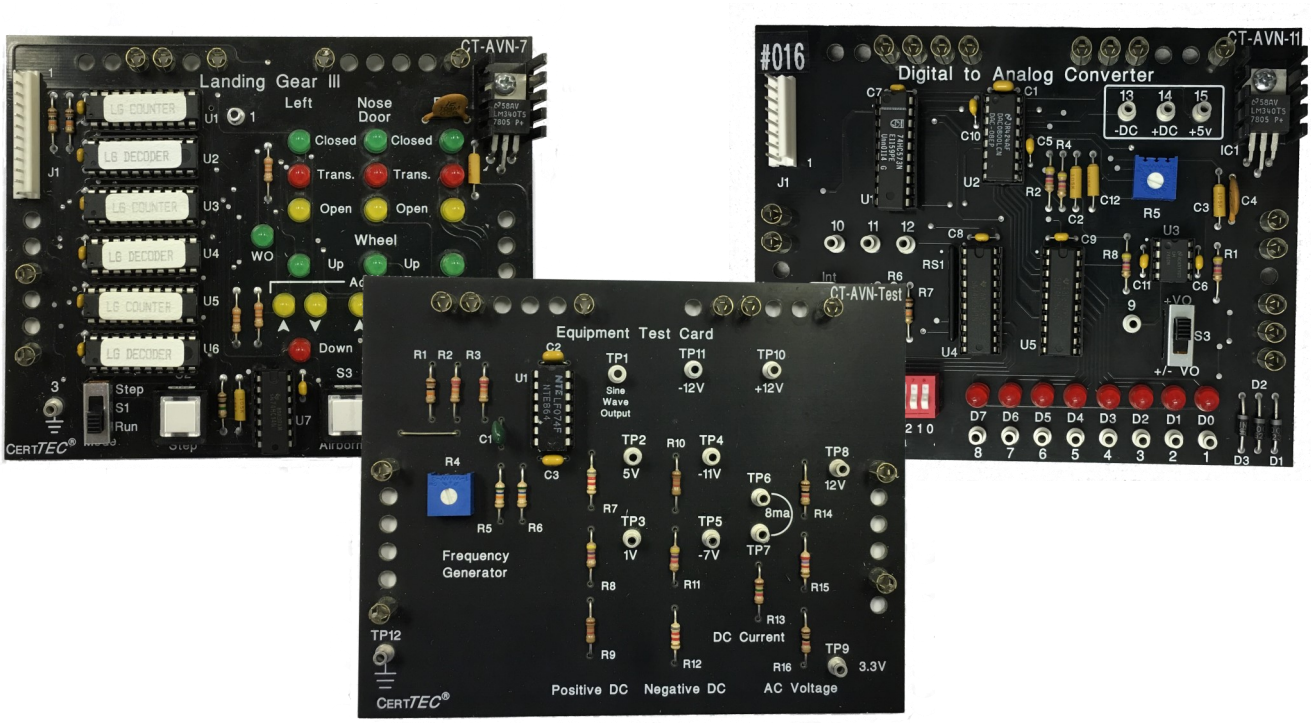
Price:	$275
Hands-On Required:	Yes
Passing Score:	70%
Time Limit:	4 hours

SPI Product Hardware

Cert*TEC* BEE exam circuit card set	$1,499
Cert*TEC* AEE exam circuit card set	$1,699
Cert*TEC* BEE upgrade to AEE circuit card set	$629

Note: Contact SpaceTEC Partners, Inc. to learn about Combo pricing.

Cert*TEC* Avionics exam circuit card set	$1,299
Aviation Electrician—EWIS circuit card set	$599
Aviation Electrician—EWIS materials kit	$74.99



SPI Certification Product References

[1]Requires Nida Corp. 110 or 130E Trainer (available separately from Nida Corp.)
[2]Requires Nida Corp. 110 or 130E Trainer (available separately from Nida Corp.) and Cert*TEC* BEE exam circuit card set
[3]Requires Nida Corp. 130E Trainer (available separately from Nida Corp.) and Cert*TEC* AEE exam circuit card set. *If location has BEE circuit cards and is upgrading to AEE, see AEE upgraded circuit card set price on previous page.*

[4]Prerequisite: EN 1 written exam (administered through ETA-I)
[5]Prerequisite: EN 2 written exam (administered through ETA-I)
[6]Prerequisite: EN 3 written exam (administered through ETA-I)
[7]Prerequisite: EN 4 written exam (administered through ETA-I)

[9]Avionics CBT Written Exam Modules: Electrics, Electronics, Digital Techniques, Materials and Hardware, Maintenance Practices, Avionics Systems, and Engine Instrumentation

[10]Requires Cert*TEC* Avionics exam circuit card set

[11]Requires Cert*TEC* Aircraft Electrician—EWIS (AE-EWIS) card set
(Materials kit sold separately)

[12]Based on ASTM International F3245.17 - Aircraft Electronics Technician Personal Certification Standard

[13]Third-Party End-of-Course Testing for Nida Corp. Computer-Based Avionics Training
[14]Requires Nida Corp. 130E Trainer and student license (sold separately)

[15]Based on European Aviation Safety Agency (EASA) Part 66 B2 Avionics Standard

[16] Written exam (each module) only; Practical required at additional cost