NEBB TAB Seminar

Testing, Adjusting & Balancing

(TAB CP) Seminar

May 20-23, 2027

Gaithersburg, Maryland

27.50

APPROVED CECs

WHO SHOULD ATTEND

- Professionals with a strong background in HVAC and TAB work considering an extensive review to enhance their technical education
- Facility Managers
- Facility Operators
- Mechanical Contractors
- Engineers
- Energy Auditors
- Building Commissioning Agents
- Other Professionals interested in learning about TAB
- Qualified Candidates for the NEBB TAB CP
- Experienced NEBB CT seeking to advance to the NEBB CP level

SEMINAR LOCATION

Robert B. Gawne NEBB Training and Education Center
8575 Grovemont Circle
Gaithersburg, MD 20877

REGISTER BY

April 20, 2027

Meet Your Instructors

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Travis Short, PE, NEBB CP

Travis Short is a Lead Commissioning Specialist for Fleet Data Centers. Travis has 22+ years' experience and received his Bachelor of Science in Mechanical Engineering from the Missouri University of Science & Technology. Travis is a NEBB Certified Professional in both Building Systems Commissioning and Testing, Adjusting and Balancing of Environmental Systems. His capabilities range from large central utility plants to geothermal heat pump technologies and all mechanical systems in-between. His advanced knowledge of Building Automation & Management Systems stems from the fact that he has designed, built, installed, and programmed various systems ranging from HVAC controls to PLC's. He is a published author with chapters in the following: "Web Based Energy Information and Control Systems" and "Web Based Enterprise Energy and Building Automation Systems." Mr. Short serves on the NEBB TAB and Cx Committees.

George Martin, PE, NEBB CP

George Martin, PE with Brooks Building Solutions, has 12 years of experience in HVAC. He is a registered Professional Engineer in the state of Florida and served in both project design and onsite test / support / troubleshooting roles for healthcare, commercial, and federal projects. He obtained his NEBB TAB Certified Professional Certification in 2017. He is also a NEBB Certified Professional in Building Enclosure Testing, Sound Measurement, and Vibration Measurement. He is a part of the NEBB BET Committee and NEBB TAB Committee.

Donald Pittser, NEBB CP

Donald Pittser, President of JEDI Balancing Inc. founded in 2000 in Colorado, has more than 35 years' experience with his first TAB project in 1986. He obtained NEBB TAB Certified Professional Certification in 1999. Mr. Pittser was awarded the Golden Castle Award by the United States Army Corps of Engineers (USACE) for his work in Afghanistan from 2012-2015 completing 68 projects for the USA Department of Defense (DoD) under Combat Zone security threat and completed over 165 DoD International Projects. Donald is a NEBB Certified Professional in Testing, Adjusting and Balancing of Environmental Systems (1999), Whole Building Technical Commissioning of New Construction (2005), Sound Measurement & Vibration Measurement (2017), and Building Enclosure Testing (2022). Mr. Pittser serves on the NEBB TAB Committee.

About The Seminar

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Building owners and tenants are concerned that environmental performance of buildings must be optimal while operating costs should be minimal. These goals can only be accomplished when a building's HVAC and hydronic systems are properly balanced. Three major steps used to achieve the proper operation of the HVAC and hydronic systems and a desirable climate are testing, adjusting, and balancing (TAB).

Formulas and Their Use

Formulas are used daily by a TAB professional and should be memorized and applied appropriately as needed. Formulas include ratios of speed vs volume vs pressure vs BHP for air and hydronic systems. Other formulas that become necessary on occasion include V-belt length, BTUH, sensible, latent, and total heat, and others. Attendees will receive a list of commonly used formulas for their use and application.

Electricity

Attendees will re-familiarize themselves with single vs three phase systems, how to measure voltage and amperage, overload protection, calculation of brake horsepower, and the need for using safe practices and safety equipment for protection while gathering necessary measurements.

Fan Laws & Curves

Fan affinity laws will be covered, and attendees will review how to apply known data to fan curves. Instructors will discuss individual fan systems as well as fans in series and fans in parallel.

Pump Laws & Curves

Pump affinity laws and how to apply known data to pump curves will be discussed and demonstrated. Individual pumping systems as well as open systems, closed systems, pumps in series, and pumps in parallel, and NPSH requirements will be covered.

Air Systems

Various configurations of air systems such as supply, return and exhaust systems as well as constant volume, variable volume, heat recovery, induction systems, active chill beam systems, and makeup air systems will be reviewed.

Psychometrics

The use of a psychrometric chart as it applies to TAB and related to the physical properties of air and the relations of the properties to each other will be reviewed. Attendees will spend considerable time learning to plot psychrometric charts and understand the principles.

Problem Solving

TAB Professionals identify problems and determine solutions or provide necessary information for responsible parties to address and correct the problem. This involves solid logic capabilities requiring the professional to exercise a systematic approach to the identification and resolution of problems or difficulties exposed by the TAB process.

Engineering Fundamentals

The course will cover basic Heat Transfer and Fluid Mechanics as they relate to TAB.

TAB Procedural Standards and TAB Reports

The course will cover the requirements of the NEBB TAB PS and will address what constitutes a NEBB TAB Report.

Seminar & Exam Agenda

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Thursday, May 20

7 CECs

Lunch provided

7:30 am	Registration
8:00 am - 4:30 pm	Heat & Heat Transfer, Fluid Mechanics, and Psychrometrics

Friday, May 21

7 CECs

Lunch provided

8:00 am - 4:30 pm	TAB Measurements, TAB Instruments, Electricity, Motors, Controls, Fans, Fan System Relationships, and Duct Systems

Saturday, May 22

7 CECs

Lunch provided

8:00 am - 4:30 pm	TAB Reports, TAB Procedural Standards, Pumps, and Pump System Relationships

Sunday, May 23

6.5 CECs

Lunch provided

8:00 am - 4:00 pm	Hydronic Systems, Pipe Sizing, Safety/ARC Flash, and Other Requirements

Monday, May 24

Optional Exam

Lunch not provided

7:30 am	Registration
8:00 am - 1:00 pm	TAB CP Exam

Scheduled activities may change depending on location, instructors and other factors.

Travel & Location

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Review travel arrangements before registering. Hotel and transportation costs are not included in the seminar fee.

Seminar Location

Robert B. Gawne NEBB Training and Education Center
8575 Grovemont Circle
Gaithersburg, MD 20877

Key Dates

Arrival: Wednesday, May 19, 2027

Seminar: May 20-23, 2027

Optional Written Exam: May 24, 2027

Nearby Hotels

Reserve directly with your chosen hotel.

Homewood Suites Gaithersburg

805 Russell Ave
Gaithersburg, MD 20879
301-670-0008

Hilton Garden Inn & Homewood Suites by Hilton

14975 Shady Grove Rd
Rockville, MD 20850
240-507-1800

Airports

Ronald Reagan Washington National (DCA)

30 miles / about 37 minutes
Average taxi fare: $80

Dulles International (IAD)

33 miles / about 34 minutes
Average taxi fare: $80

Baltimore/Washington International (BWI)

40 miles / about 44 minutes
Average taxi fare: $100

Registration & Fees

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REGISTRATION DEADLINE

April 20, 2027

Registration and payment must reach NEBB by the deadline. Pre-registration and payment are required. Registrations are first come, first served.

Register Online

1. Log into your Certelligence portal
2. Scroll to “My Events”
3. Select the seminar and register

$2,000

Instruction, morning/afternoon breaks and lunch as scheduled. Candidacy application and exam fees are separate.

Publication Fees

PUBLICATION	NEBB / NON-NEBB
2026 Procedural Standard for TAB of Environmental Systems, 10th edition	**$125 / $150**
TAB Technician Manual	**$250 / $300**
Environmental Systems Technology	**$200 / $250**
TAB Professional Home Study Course for CPs	**$600 / $800**

Cancellation Policy

Cancellation by registrants, regardless of reason, will be subject to a $250 service charge to cover NEBB’s expenses. A refund of the prepaid registration will be made less the $250 service charge. No Shows or late cancellations (those who registered for the seminar who do not cancel at least 14 days prior to the seminar and subsequently do not attend the course) will forfeit the entire registration fee unless a replacement can be found. NEBB reserves the right to cancel any seminars having insufficient registrants, in which case, all prepaid registration fees will be refunded in full. Please advise NEBB and your hotel of your cancellation as soon as possible.

Before You attend

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Attendee Requirements

1. Verifiable practical TAB experience.
2. Minimum working capability in mathematics, including geometry and second-year high school algebra.
3. Well-versed in the application of mathematical formulas that are pertinent to TAB.
4. Possess full working knowledge of the instruments required for certification by NEBB.
5. Possess a full understanding of when, where, and how to use the instruments.

Bring To The Seminar

1. Straight edge
2. Hand calculator (with square, square root, cube, and cube root functions)
3. Pencils
4. Laptop/iPad to review course materials.
5. Printouts of the NEBB Formulas

Recommended Publication

- Testing, Adjusting & Balancing Specifications (download at www.nebb.org)
- 2026 Procedural Standard for TAB of Environmental Systems, 10th edition
- Environmental Systems Technology (1999)
- Instructor's Guide to TAB Manual for Technicians (NEBB-certified firms only)
- TAB Technician Manual (2021), 3rd edition
- Testing, Adjusting and Balancing Study Course for CPs
- Body of Knowledge approved 9/3/18, v.8

Optional Exam

If you are interested in testing after the seminar, please email candidacy@nebb.org for the candidacy application material. Pre-approval and payment are required before April 20, 2027.