

# NEBB Cleanroom Performance Testing Certified Professional Seminar and Exams



**October 20-22, 2014  
Orlando, FL**



## *Introduction*

Cleanroom testing must be performed to ensure that cleanrooms comply with design and performance criteria. Cleanroom testing is typically done by third-party professionals. During testing, professionals identify deficiencies and confirm accuracy of certified cleanroom documents. This practice helps owners to verify system performance and ensure regulatory compliance.

NEBB Cleanroom Certified Firms have the required instruments to perform the testing. In addition, they have at least one qualified Certified Professional who conducts the Cleanroom Performance Testing in accordance with the NEBB Procedural Standards for Certified Testing Cleanrooms.

**NEBB Cleanroom Performance Testing Seminar for Certified Professionals** provides hands-on, practical training needed for Cleanroom Performance Testing. Participants benefit from case studies and an interactive laboratory session in which they apply theories learned in class. Participants also gain experience operating a variety of testing equipment, while learning about practical challenges and remedies in cleanrooms.

## *Learning Objectives*

- Understand the NEBB Procedural Standards for Certified Testing of Cleanrooms
- Learn best practices for Certified Testing of Cleanrooms in healthcare setting, pharmaceuticals, and other applications
- Review critical guides, standards and codes for cleanroom testing
- Case studies focusing on real-life scenarios and solutions

## *Who should attend*

This seminar is intended for individuals with at least two years of cleanroom testing experience, including:

- Technicians and managers experienced in Cleanroom Performance Testing
- Cleanroom operators
- Hospital facility maintenance and management personnel
- Pharmaceutical safety professionals
- Safety and biosafety professionals
- NEBB Cleanroom Certified Technicians seeking NEBB Cleanroom Certified Professional status.
- Individuals wishing to refresh or advance their understanding of cleanroom performance testing (e.g., QA/QC Managers, Engineers, etc.).

## *Seminar schedule*

Monday, October 20	7:30 AM - 8:00 AM 8:00 AM - 5:00 PM	<a href="#">Registration</a> <a href="#">Introduction and Overview</a> <a href="#">Air Velocity and Volume</a> <a href="#">Room Classification and Standards</a> <a href="#">Room Pressurization</a> <a href="#">Leak Testing Photometer</a> <a href="#">Leak Testing Particle Counter</a> <a href="#">Other Classroom Tests</a> <a href="#">Cleanroom Protocol and cGMP</a>
Tuesday , October 21	8:00 AM - 5:00 PM	<a href="#">Report Writing and Document Control</a> <a href="#">Report Review</a> <a href="#">SOP and SOP Generation</a> <a href="#">Safety Program</a> <a href="#">Calibration Program</a> <a href="#">Technician Training</a> <a href="#">General Knowledge Exam</a>
Wednesday, October 22	8:00 AM - 9:00 AM 8:00 AM - 1:00 PM	<a href="#">Question and Answers</a> <a href="#">Report Review and Error Finding</a>

## *Instructors (preliminary—subject to change)*



### **Dan Milholland**

Dan Milholland has extensive experience in filter testing and cleanroom contamination control in the semi-conductor, aerospace, and pharmaceutical industries. He has served on various IEST working groups for over 30 years. He has served as the lead instructor for "Testing HEPA Filters in Cleanrooms" for the Eagle-son Institute, Sanford, Maine since 1992. He is on the NEBB Cleanroom Committee to certify cleanroom certifiers. He completed both his undergraduate and graduate studies at North Carolina State University where he was awarded a Master's degree in bio-chemistry.



### **Pat Law**

Pat Law Pat is the founder and owner of a cleanroom certification company (HEPATEST, Inc ) with over 25 years experience in performance testing and certifying cleanrooms. He has served with NEBB as a Board of Director, Cleanroom committee chair and currently as a committee member. He has taught numerous seminars and helped develop NEBB's Cleanroom programs and Cleanroom standards. Patrick is very active in other industry organizations such as IEST and CETA.

## ***NEBB Cleanroom Performance Testing Certified Professional - Cleanroom fundamentals examinations***

The NEBB CPT discipline is similar to all of the other NEBB disciplines in that there are written and practical examinations that must be successfully completed in order to attain certification as a Certified Professional. These written and practical examinations test the knowledge, engineering application and field testing skills required to properly manage cleanroom testing projects. In preparation for the exam, the NEBB Cleanroom Committee wants to make sure everyone comes prepared for the two Cleanroom Performance Testing Certified Professional exams.

### **Exam 1: General Knowledge exam (up to 2 hours)**

The general knowledge exam is a multiple choice format. There are several questions that require calculations. The test is intended to cover the following:

- Establishing test criteria based on a given scope
- Knowledge of Standards
- SOP Requirements
- Safety Requirements
- Primary Tests
- Secondary Tests

### **Exam 2: Report and Documentation Review exam (up to 5 hours)**

The exam focuses on the following:

- Verification that all testing conforms to the SOP provided
- Confirming the validity of data provided
- Identification of errors
- Conformance to industry standards referenced in the SOP provided



Please bring all standards available to you for use on both exams. Standards will not be provided at the seminar and sharing between candidates will not be allowed. Bring anything you deem necessary for use during these exams including calculator, laptop computer, and pens/pencils.

### *Recommended reference material*

- ISO14644, Cleanrooms and associated controlled environments, 2010, Part 1-3
- IEST RP- CC-001.5, HEPA and ULPA Filters
- IEST RP- CC-002.3, Unidirectional-Flow Clean-Air Devices, 2009
- IEST RP- CC-006.3, Testing Cleanrooms
- IEST RP- CC-034.3, HEPA and ULPA Filter Leak Test
- Annex 1 of the EU Guideline
- NEBB Procedural Standards for Certified Testing of Cleanrooms - 2009

The use of laptop computers and any personal spreadsheets for cleanroom calculations will be allowed during the exam. However, no internet or e-mail access will be permitted.

Candidates and their company sponsors, will be required to sign a “Hold Harmless” statement indemnifying NEBB, NEBB Employees, Seminar Instructors and the training facility, of any and all losses associated with seminar participation.

### *Exam schedule*

Please note that exams are optional and are NOT included in the cost of the seminar registration. Additionally, NEBB will offer all examinations to any eligible candidate who wishes to be tested but does not want to attend the seminar. Contact Connie Vitale at NEBB prior to October 10, 2014 to schedule exams and confirm eligibility for certification.

### *Certification requirements*

NEBB offers Cleanroom Performance Testing certification to firms and individuals. All of the requirements are available on the NEBB website at [www.nebb.org](http://www.nebb.org).

Certification of firms is available to all firms performing cleanroom testing services. Firm requirements include: Length of time a firm has been in operation, ownership of the required instruments and equipment, letters of recommendations from owners, design professionals and contractors.

NEBB CPT Certified Professional certification requires certain combinations of both educational and field experience performing cleanroom testing services.

A NEBB Certified CPT Professional must successfully pass the Cleanroom fundamentals examinations, the Cleanroom practical examination and the Cleanroom Professional practical examination.

## *Fees*

See the Registration form for applicable fees. Registration fees DO NOT cover travel or accommodation expenses. NEBB will provide refreshments and lunch each day.

## *Registration*

**Complete attached Registration Form and send with payment to:**

Connie Vitale | NEBB | 8575 Grovemont Circle, Gaithersburg, MD 20877-4121

**REGISTRATION DEADLINE: Friday, October 10, 2014**

**Enrollment is limited. Available openings will be filled on a “first come-first served” basis.**

Please contact Connie Vitale at 301-977-3698 to confirm that space is available prior to purchasing airline tickets, or committing to other expenses. Registrants will receive a confirmation letter, including instructions regarding required seminar materials.

## *Hotel information*

The seminar will start on Monday, October 20 at 7:30 a.m. and will end on Wednesday, October 22 at 1:00 p.m. Allow 2.5 hours travel time to the airport for car return, check in, security, boarding, etc. Housing and other costs are not covered by the registration fee. **Reservations at the hotel of your choice must be made directly with the hotel.** All hotel reservations must be guaranteed by a credit card.

Closest airport (3 miles) is Orlando International Airport (MCO). The hotel provides a complimentary shuttle. Call the hotel to reserve the shuttle. NEBB has reserved a limited number of guest rooms for \$99 per night plus taxes. Please mention NEBB group during reservation to benefit from with negotiated rate. The hotel offers free breakfast, gym, free wireless internet.

### **Hyatt Place Orlando Airport—Northwest**

5438 Forbes Place, Orlando, Florida 32812

Tel: +1.407.816.7800

**Seminar Date:** October 20-22, 2014

**Arrival in Orlando, FL:** October 19

## NEBB CPT Certified Professional Seminar Registration Form

I will attend the NEBB CPT Certified Professional Seminar and Exams, October 20-22, 2014

Name: \_\_\_\_\_ Nickname: \_\_\_\_\_  
Company: \_\_\_\_\_ Title: \_\_\_\_\_  
Address: \_\_\_\_\_ City \_\_\_\_\_  
State: \_\_\_\_\_ Zip: \_\_\_\_\_ Tel: \_\_\_\_\_ Fax: \_\_\_\_\_  
Email: \_\_\_\_\_ Require special assistance: YES / NO: \_\_\_\_\_

All hotel reservations must be made directly by the seminar participant.

### Fees: (check all that apply)

- \$800.00 SEMINAR REGISTRATION FEE (for NEBB Certified Firms)  
 \$1000.00 SEMINAR REGISTRATION FEE (for Non-NEBB Firms)  
 \$250.00 GENERAL KNOWLEDGE CPT CP EXAM  
 \$400.00 REPORT AND DOCUMENTATION REVIEW CPT CP EXAM  
 \$50.00 NEBB PROCEDURAL STANDARDS FOR CERTIFIED TESTING OF CLEANROOM  
 \$100.00 for NON-NEBB Firms (Hard-Copy)  
\$ \_\_\_\_\_ TOTAL AMOUNT (Please call NEBB for International Shipping Charges)

### Payment method

- Check Enclosed made payable to NEBB for Seminar Registration Fee  
 VISA                       MASTERCARD                       AMERICAN EXPRESS

Name on the Card \_\_\_\_\_  
Credit Card Number \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ Expiration \_\_\_\_\_  
Security Code \_\_\_\_\_ Signature \_\_\_\_\_

**Form & check must reach the NEBB Office no later than Friday, October 10, 2014. RETURN TO:**

Connie Vitale, [connie@nebb.org](mailto:connie@nebb.org) | NEBB | 8575 Grovemont Circle, Gaithersburg, Maryland 20877-4121

### Conditions

- Pre-registration and pre-payment of fees are necessary to ensure your participation in the seminar.
- 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 and examination fees will be made less the \$250 service charge. All publication sales are final.
- No shows or late cancellations (those persons registered for the seminar who do not cancel 30 days prior to the seminar and subsequently do not attend the course) will forfeit the entire registration fee and examination fee unless a replacement can be found.
- NEBB reserves the right to cancel any seminars having insufficient registrants, in which case, all prepaid registration and examination fees will be refunded in full.
- NEBB cannot be responsible for any losses resulting from cancellation of a seminar.

### For NEBB use

Registration Form Received by NEBB and Reservation Made as Requested Above.

Confirmed by: \_\_\_\_\_  
Date: \_\_\_\_\_

\* Please promptly advise NEBB and the hotel of any cancellations.

**NEBB**®

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Gaithersburg, Maryland 20877  
Telephone: 301.977.3698  
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[www.nebb.org](http://www.nebb.org)