

# Sound & Vibration Measurement Seminar

August 14-18, 2023

Seattle, WA

## This seminar is designed for:

- Individuals interested in pursuing NEBB certification in sound and/or vibration measurement.
- Professionals from other disciplines who want to expand their knowledge of sound and vibration as it relates to their business.
- Firms interested in learning more about sound and vibration.
- Engineers and architects interested in expanding their knowledge of sound and vibration.

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## Location:

**MacDonald Miller**  
**17930 International Blvd.**  
**Suite #120**  
**SeaTac, WA 98188**

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Registration Deadline:

**July 14, 2023**





## Our COVID-19 Response Plan

Considering of COVID-19, NEBB has taken several proactive steps to help ensure the health and safety of our attendees and instructors. Precautions such as constant sanitization of the seminar area, increased attention to high-touch areas in the rooms, limits on the number of attendees during the seminar and protective gear for our Instructors and are in place. NEBB also will be practicing social distancing and maintaining 6 feet apart.

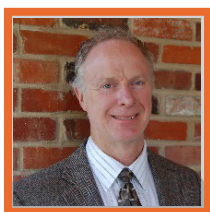
### Responsibilities for Each Attendee:

- If you are experiencing any symptoms of COVID-19 like running a fever, coughing or shortness of breath, please do not attend the seminar.
- You have been exposed to someone who has tested positive for COVID-19 in the last 14 days.
- You have a compromised immune system or are considered “high risk.”
- Masks are required during the seminar and gloves can be worn if desired.
- Sanitize hands prior to entering seminar location.
- Avoid shaking hands or engaging in any unnecessary physical contact.
- Signing a waiver prior to the seminar.





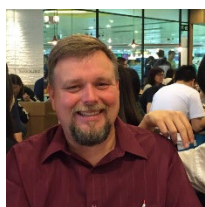
### Seminar Instructors:



#### **Stuart McGregor**

##### **Engineering Dynamics, Inc., Englewood, CO**

Stuart McGregor, PE, is senior acoustical engineer at Engineering Dynamics, Inc. He has 30 years of experience as an acoustical engineer and vibration analyst, for environmental and building projects. He is a member of NEBB's Sound and Vibration (S&V) Committee, NEBB Certified Professional (S&V) and ANSI CAT II Vibration Analyst certified (via the Vibration Institute). Stuart is active in the Rocky Mountain NEBB chapter and has been a co-instructor for NEBB CP and CT sound and vibration training seminars.



#### **Chad Matthews**

##### **Air Technologies, Inc., Austin, TX**

Is Principal at Air Technologies, Inc. in Austin, Tx. He has 20 plus years of experience as a TAB CT and is currently a TAB, SM and VM CP. He is a member of NEBB's Sound and Vibration (S&V) Committee, NEBB Certified Professional (S&V). He is active in Texas NEBB and has been a co-instructor for NEBB CP and CT sound and vibration training seminars.





## About This Seminar:

**NEBB's Sound and Vibration Seminar is designed to prepare professionals from all disciplines in the correct methods to properly perform consistent, repeatable readings to meet sound and/or vibration specifications for projects.**

Sound and vibration measurement are a valuable service for building owners who strive to maintain quality environment and minimize maintenance costs. Sound and vibration measurement have been shown to provide tangible cost savings.

- Sound measurement and analysis plays an important role in providing acceptable space usage for various commercial, manufacturing, and industrial activities.
- Vibration measurement and analysis is a proven predictive maintenance activity that helps minimize repair and downtime costs for rotating machinery.

### Learning Objectives

- Learn how to satisfy specification and customer requirements and know how to perform accurate repeatable sound and vibration measurements.
- Learn basic troubleshooting and diagnostic knowledge.





## Monday, August 14, 2023

(6.5 CECs)

**7:30 am:** Registration

**8:00 am – 4:30 pm:** Physics of Sound, Practice making sound level measurements, Practice Problems.

*(Lunch Provided)*

## Tuesday, August 15, 2023

(6.5 CECs)

**8:00 am – 4:30 pm:** Review, Sound level Instrumentation, Calibration of Sound Level Instrumentation, Sound Level Measurement, Analysis of Sound Measurement, NEBB Documentation Procedures, Practice Problems, Practice making sound level measurements, Practice Plotting NC and RC Charts.

*(Lunch Provided)*

## Wednesday, August 16, 2023

(3.5 CECs)

**8:00 am – 12:00 pm:** Sound Optional Written & Practical Exams

**12:30 pm – 4:30 pm:** Vibration Fundamentals, Acceleration, Velocity, Displacement, Simple Harmonic Motion, Single Degree of Freedom Systems, Relationship between Acceleration and Velocity, Displacement Phase.

*(Lunch Provided)*

## Thursday, August 17, 2023

(6.5 CECs)

**8:00 am – 4:30 pm:** Vibration Unit Conversions Calculations, Vibration Instrumentation, Overall vibration level meters, Spectrum Analyzers, Frequency Range, Bandwidth, Lines of Resolution, Frequency Resolution, Windowing, Transducer Sensitivity, Accelerometer, Velocity Transducers and Displacement Sensors.

*(Lunch Provided)*

## Friday, August 18, 2023

(3.5 CECs)

**8:00 am – 12:00 pm:** Vibration Fundamentals

**12:30 pm – 4:30 pm:** Vibration Optional Written & Practical Exams



## Travel Information:

We recommend all attendees that are unfamiliar with the seminar location or require travel from another location review the following information prior to registering for this seminar.

### Hotels:

Attendees can reservations directly with the hotel of their choice. Below is a short list of hotels in close proximity to the training center. Hotel and transportation costs are not covered by the seminar registration fee.

#### Holiday Inn Express

19621 International Blvd.  
SeaTac, WA 98188  
(206) 824-3200

#### Ramada Inn

16720 International Blvd.  
SeaTac, WA 98188  
(866) 338-6732

### Airport:

SeaTac Airport, Seattle, WA

## Important Dates and Times:

#### Arrival in Seattle, WA

Sunday, August 13, 2023

#### SV Seminar Dates:

Monday-Friday, August 14-18, 2023

#### Optional Sound Exams

Wednesday, August 16, 2023

#### Optional Vibration Exams

Friday, August 18, 2023

**Seminar location:**

**MacDonald Miller**

17930 International Blvd.

Suite #120

SeaTac, WA 98188



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# NEBB AUGUST SV SEMINAR REGISTRATION FORM

**Registration form and payment must reach the NEBB office on or before July 14, 2023.**

Pre-registration and payment of fees are necessary to ensure your participation in the seminar.

Three ways to register:

1. Online through the [Certelligence Portal](#)
2. Email this form to [training@nebb.org](mailto:training@nebb.org), or
3. Mail this form to: NEBB, 8575 Grovemont Circle, Gaithersburg, MD 20877.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

Phone/Cell: \_\_\_\_\_

Email: \_\_\_\_\_

Please list any dietary restrictions and/or ADA accommodations:

\_\_\_\_\_

## Optional Exam Opportunity:

Please check the box below. If interested, please email [certification@nebb.org](mailto:certification@nebb.org) for the candidacy application process. Pre-approval and payment are required before the deadline.

Yes, interested in taking the exam

No, not interested in taking the exam

## Seminar Fees (Check all that apply)

\$800 Sound Measurement Seminar Registration Fee  
(Does not include candidacy application or exam fees)

\$800 Vibration Measurement Seminar Registration Fee  
(Does not include candidacy application or exam fees)

## Publication Fees

\$95 NEBB/ \$125 Non-NEBB: Procedural Standards for the Measurement of Sound and Vibration (Please indicate preference: hard copy or electronic)

\$90 NEBB/ \$130 Non-NEBB: Sound and Vibration Design Analysis (Please indicate preference: hard copy or electronic)

\$150 NEBB/ \$200 Non-NEBB: Sound Measurement HSC

*\*Prices for publications do not include shipping and handling*

## Payment Method

Check enclosed made payable to NEBB

Visa  MasterCard  American Express

Name on Card \_\_\_\_\_

CC Number \_\_\_\_\_

Expiration Date \_\_\_\_\_

Security Code \_\_\_\_\_

Signature \_\_\_\_\_

\$ \_\_\_\_\_ **Total Amount Due**

**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.





## Recommended Publications:

To achieve the best learning results, it is highly recommended that attendees **read the following publications BEFORE** attending the seminar:

- *Procedural Standards for the Measurement and Assessment of Sound & Vibration*
- *Sound & Vibration Design and Analysis*
- *Sound & Vibration Measurement Home Study Course*

Instructor assumes that all attendees have a thorough working knowledge of the requirements of these NEBB publications prior to attending the seminar. Publications can be purchased online at [www.nebb.org](http://www.nebb.org).

## Important Reminders:

1. Registrations will be filled on a “first come-first served” basis. Please note that class sizes are limited due to Covid Social Distancing Protocol.
2. Seminar fees include course instruction, lunch, am/pm breaks.
3. Seminar fees do not include anything pertaining to certification.
4. For information on certification or exams please contact [certification@nebb.org](mailto:certification@nebb.org).



## Questions About This Seminar?

Call 301-977-3698 or email [training@nebb.org](mailto:training@nebb.org)