

---

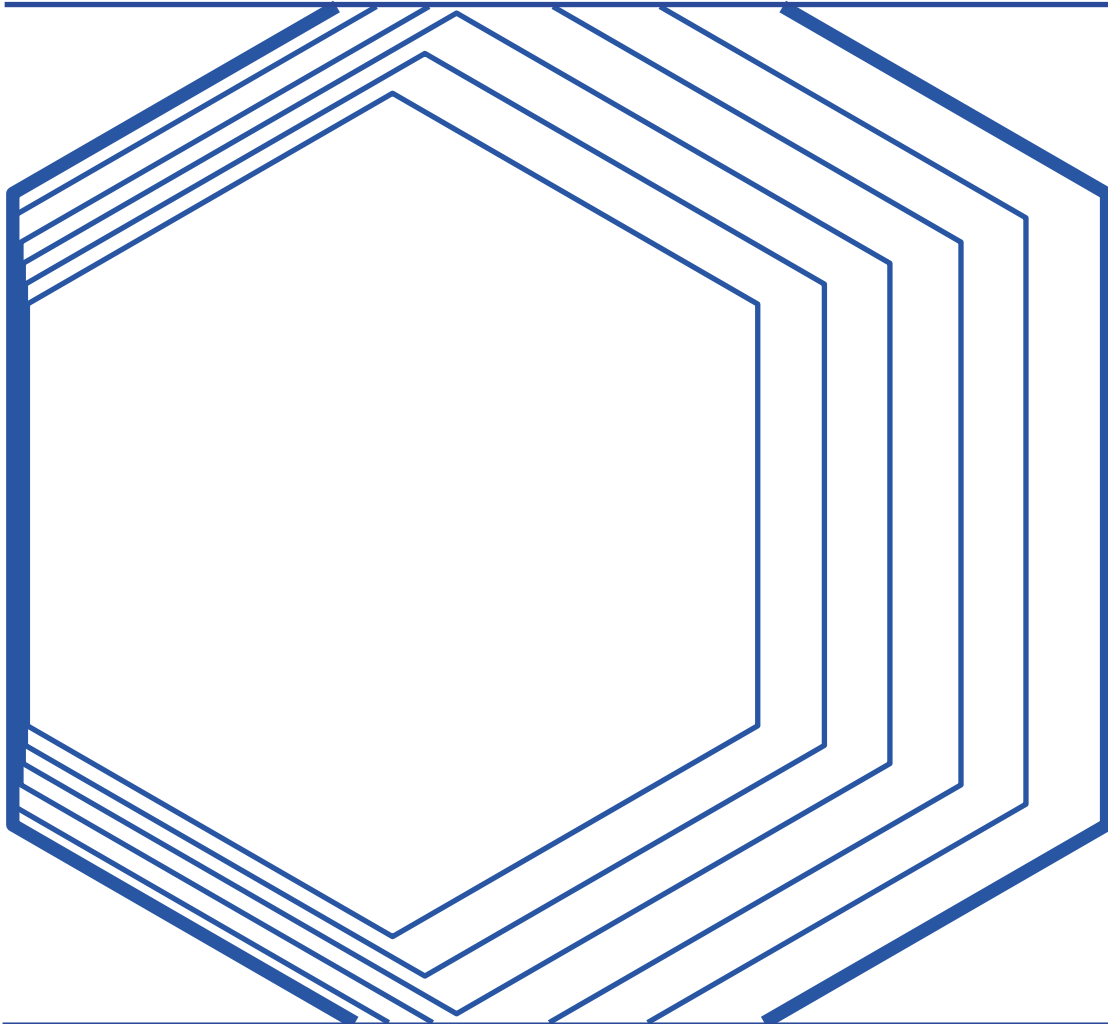
# HexSizer®

# Student Outline

## Training Curriculum



**WES JOHNSON**  
(818) 445-0943  
[wes@hexsizer.com](mailto:wes@hexsizer.com)



---

## Audience

- Bolting Technicians, Millwrights, pipefitters, steamfitters, and field maintenance technicians.
  - Contractor crews (shutdowns, outages, turnarounds).
  - Apprentices and new hires in bolting/joint integrity programs.
  - Inspectors and planners performing job walks.
- 

## Training Objectives

**By the end of the course, trainees will be able to:**

1. Explain the challenges of sizing heavy hex nuts/bolts using traditional methods.
2. Correctly identify nut and stud sizes using the HexSizer<sup>®</sup> Heavy Hex Gauge<sup>™</sup>.
3. Distinguish between nominal, minimum, and actual ASME size tolerances.
4. Apply the tool during job walks, maintenance, and shutdown scenarios.
5. Reduce downtime, errors, and safety risks, selecting the correct size tools first time.



---

# Suggested Curriculum Outline

---

## Module 1 – Introduction to Heavy Hex Fasteners

### (Classroom/Presentation)

- Overview of ASME 18.2.2 standards (inch and
- Difference between standard, heavy hex, and SAE hex nuts.
- Importance of correct sizing in industrial
- Case study: cost of downtime when the wrong socket is brought to the job.

---

## Module 2 – The Problem with Traditional Measurement

### (Demonstration)

- Hands-on: attempting “across-the-flats” measurement with a stud in place.
- Discussion: tolerance ranges and why a 2” nut may measure 1.938”.
- Interactive: guessing nut size with calipers or tape, then comparing to actual standard size.



---

## Module 3 – Introducing the HexSizer®

### (Tool Familiarization)

- Parts of the HexSizer®
- Nut measurement (single flat method instead of across flat method).
- Stud size gauge.
- Thread pitch gauge (if included in kit).
- Materials and durability (anodized 6061 aluminum, heat resistance).
- Storage methods (lanyard, wallet, tool pouch).

---

## Module 4 – Using the HexSizer® in Practice

### (Hands-On Training)

- **Exercise 1:** Measure loose nuts and bolts.
- **Exercise 2:** Measure installed nuts on studs (simulation board).
- **Exercise 3:** Match nut to stud size.
- **Exercise 4:** Perform a “job walk” simulation—use HexSizer to create a correct tool list for a mock work-order.



---

## Module 5 – Common Mistakes and Troubleshooting

- Measurement is between the tick lines. Which line to choose?
- Misreading tick lines on a dirty worn HexSizer®.
- Confusing Metric vs Inch sizes.
- Relying on calipers or fractional ticks instead of standard size marks.

---

## Module 6 – Assessment and Certification

### (Hands-On Training)

- Written quiz: nut/stud sizing principles and ASME standards
- Practical test: measure a set of installed and loose nuts with the HexSizer®
- Pass/fail criteria: demonstrate accurate identification within a given time

Graduates receive a **HexSizer® Certification of Competency** (Trainer-issued), which contractors can use to show their crews are properly equipped and trained.

