Ira A. Fulton Schools of Engineering
Arizona State University

Ultrasonic Testing

- Accessible
- Flexible Learning
- Stackable
- Affordable
- Expert Instruction

Industrial Ultrasonic Testing 1 & 2

This program consists of the Industrial Ultrasonic Testing 1 and Industrial Ultrasonic Testing 2 badges. Learners gain hands-on experience with UT equipment and simulation tools, mastering key techniques for weld inspection, defect detection, and data evaluation. Graduates will be equipped for roles in aerospace, oil and gas, automotive, and more. This program provides 80 hours Ultrasonic Testing (UT) Level 1 training recognized by the American Society of Nondestructive Testing (ASNT)

Key Skills Covered:

- Fundamentals of general nondestructive testing
- Fundamentals of UT and nondestructive testing methods
- Operating and calibrating UT systems for inspections
- Performing thickness, weld, and defect testing
- Simulating ultrasonic beams and advanced imaging techniques
- Applying DAC, TCG, and DGS methods for UT sizing

Acess ASU's simulation tools, virtual reality, cyber hands-on tools, unique lab facilities with over $1 million samples and state of the art UT systems!

Instruction by ASU Associate Professor Ehsan Dehghan-Niri

Earn ASU Engineering Badges to showcase your new skills

This is a grant-funded program and is offered at no cost to participants

Hybrid Instruction

This program is sponsored by the Department of Defense and hosted by the C2D team.

Three weeks of online training followed by one week in-person at ASU Poly!

Week 1 Feb 10-16 asynchronous Live Session Feb 14, 5pm MST	Gain foundational knowledge of materials processing, nondestructive testing methods, and ultrasonic testing principles, including equipment use, wave behavior, and defect detection techniques. • Basic Principles of Materials Processing and Nondestructive Testing • Basic Principles of Ultrasonic Testing (UT)
Week 2 Feb 17-23 asynchronous Live Session Feb 21, 5pm MST	Explore ultrasonic testing techniques, including beam analysis, calibration, corrosion inspection, and angle beam testing, while mastering ultrasound imaging and simulation tools to evaluate material discontinuities • Ultrasonic Testing Techniques • Ultrasonic Imaging and Angle Beam Testing
Week 3 Feb 24-Mar 2 asynchronous Live Session Feb 28, 5pm MST	Develop foundational skills in ultrasonic testing for defect detection and sizing, using advanced simulation tools to identify and evaluate defects in welds, composites, and other materials through techniques like angle beam UT, DAC, TCG, and DGS. • Ultrasonic Testing for Defect Detection • Fundamentals of Amplitude-based UT Sizing
Week 4 Live Instruction Mar 3-7, 2025 8:30-3:30pm MST, ASU Poly Campus	Apply your knowledge of ultrasonic testing to perform hands-on calibration, thickness measurement, corrosion inspection, and weld evaluation using both straight and angle beam techniques, while adhering to industry standards and gaining practical experience with real-world samples. • Practical Training of Straight Beam Testing • Practical Training of Straight and Angle Beam UT Evaluation

For questions, please contact **kmohma1@asu.edu**

Learn More and Apply Here

About ASU Engineering Stackable Microcredentials

» **What are stackable microcredentials?**

Microcredentials are focused credentials with content designed to provide you with knowledge and specific skills in technical fields. A microcredential badge demonstrates proficiency in a specific skill or attainment of certain knowledge.

Our micro-credentials are stackable towards aggregated skills in specific technical topic areas, offering varying levels of complexity (1-4) to provide you with the opportunity to "stack" your skills through into micro-badges and badges along specific topic areas within an emerging technology space!

» **What is the difference between a badge and a micro-badge?**

A badge is earned when successfully completing four approved micro-badges within a specific topic area.

A micro-badge is earned by successfully completing one short course and assessment, typically requiring 10 hours of instruction alongside 5-10 hours of additional study. Micro-badges are offered at four distinct levels, culminating with experiential learning activities to ensure you can apply the skills you gain!

» **How long does it take to earn a badge?**

A badge is earned when you successfully complete four approved micro-badges within a specific topic area. Each micro-badge is estimated at 10-20 hours of learning time, equating to 40-80 hours for a full badge.

» **How will I receive my microcredential badges and micro-badges?**

After successfully completing the requirements of the course. You will receive an email with instructions on accessing your digital badge. Badges can be proudly displayed digitally on social media and referenced on your resume.

» **How can I offer a microcredential to groups of employees?**

We are happy to work with you to design and deliver a program that addresses the needs of your workforce. In general, we offer a 10% discount to groups of 5 or more employees, and a 20% discount for 10+ employees.

Please email us at **exec-fseonline@asu.edu** for more information on bulk discounts.

» **How are stackable microcredentials different from traditional degree programs?**

Stackable microcredentials are offered with the flexibility to directly enroll without an admissions process and do not currently provide college credit.

» **How will an employer know I earned a microcredential?**

Proudly displaying your newly acquired skills on your resume and social media profile is easy to do! Simply download your badge and add it to your account to signal your skills to hiring managers. The badges can be easily shared on LinkedIn as a digitally verifiable badge.

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