

APPRENTICESHIP - NON-DESTRUCTIVE TESTING (NDT) TECHNICIAN

Program Description

Non-destructive testing (NDT) is essential to companies in the shipping, construction, oil and gas, petrochemical, nuclear, automotive, and aerospace industries, and others, to keep their end users safe from using their goods, to lower production costs, and to main a uniform quality level for their products. It helps prevent catastrophic failures like pipe leaks, airplanes crashes, nuclear reactor failure, and ships sinking. Foothill College, serving as a local education agency to the American Aerospace Technical Academy (AATA), offers the Certificate of Achievement in Non-Destructive Testing (NDT) Technician. Students will learn to use a variety of testing techniques—such as magnetic particle (MT), liquid penetrant (PT), ultrasonic (UT), phased array ultrasonic (PAUT), radiographic (RT), and digital radiography (DR)—to perform non-destructive tests, to identify defects, and to examine the physical properties of materials and components to detect corrosion, cracks, voids, and flaws. Students will be trained in non-film radiography and radiation safety with a foundation in NDT math. Per California Code of Regulations, this course is limited to students admitted to the AATA's Apprenticeship Program.

Learn more about the program on the [Apprenticeship website](#).

Program Learning Outcomes

- Students will be able to interpret data and write the results of inspections.
- Students will be able to select and set up test equipment for each of the testing techniques.
- Students will be able to interpret results with respect to applicable codes and standards.
- Students will be able to understand and apply the basics in radiography inspection.
- Students will be able to understand and apply radiation safety requirements and standards.
- Students will be able to understand and apply the laws of physics in ultrasound inspection.
- Students will be able to understand and apply the requirements for surface inspection, such as magnetic particle inspection and penetrant inspection.
- Students will be able to understand the advantages of computed and digital radiography versus film radiography.

Career Opportunities

This certificate program prepares students for Level I and II NDT Certification. The certificate program will provide opportunities for students to secure a career in aerospace, construction, offshore drilling, manufacturing, automotive, shipbuilding, oil and gas, refineries, or any industry that uses NDT.

Award Type(s)

- CA = Certificate of Achievement

Units Required

- Certificate(s): 27

Certificate Requirements

Certificate of Achievement in Non-Destructive Testing (NDT) Technician

- Units: 27

Code	Title	Units
AATA 101A	MAGNETIC PARTICLE TESTING LEVEL 1	1.5
AATA 101B	MAGNETIC PARTICLE TESTING LEVEL 2	1
AATA 102A	PENETRANT TESTING LEVEL 1	1.5
AATA 102B	PENETRANT TESTING LEVEL 2	1.5
AATA 103A	ULTRASONIC TESTING LEVEL 1	3
AATA 103B	ULTRASONIC TESTING LEVEL 2	3
AATA 104A	ULTRASONIC PHASED ARRAY THEORY	3
AATA 104B	ULTRASONIC PHASED ARRAY LABORATORY	1
AATA 105A	RADIOGRAPHIC TESTING LEVEL 1	3
AATA 105B	RADIOGRAPHIC TESTING LEVEL 2	3
AATA 105C	NON-FILM RADIOGRAPHIC TESTING	2.5
AATA 105R	RADIATION SAFETY	3
Total Units		27