

APPRENTICESHIP: AEROSPACE (AATA)

AATA 101A • MAGNETIC PARTICLE TESTING LEVEL 1

Units: 1.5
Hours: 20 lecture per quarter (20 total per quarter)
Prerequisite: This course is limited to students admitted to the Nondestructive Testing Technician Apprenticeship Program.

Degree and Credit Status: Degree-Applicable Credit Course

Foothill GE: Non-GE
Transferable: None
Grade Type: Pass/No Pass Only
Repeatability: Not Repeatable

Introduction to and theory of magnetism, including magnetic fields, material types, penetration variations, flux leakage, Fleming's Rule, and hysteresis curve. Methods of magnetism, including types of currents, field types and their advantages/disadvantages, and AC/DC field distribution. Equipment introduction, including equipment types, equipment uses, and accessories. Mediums for inspection, including different methods and their properties.

AATA 101B • MAGNETIC PARTICLE TESTING LEVEL 2

Units: 1
Hours: 15 lecture, 5 laboratory per quarter (20 total per quarter)
Prerequisite: This course is limited to students admitted to the Nondestructive Testing Technician Apprenticeship Program.

Degree and Credit Status: Degree-Applicable Credit Course

Foothill GE: Non-GE
Transferable: None
Grade Type: Pass/No Pass Only
Repeatability: Not Repeatable

Industry codes and standards; performing a test, including selecting equipment, steps to conduct a test, interpreting results, and writing test reports. Methods of applications and the different particles included in these.

AATA 102A • PENETRANT TESTING LEVEL 1

Units: 1.5
Hours: 20 lecture per quarter (20 total per quarter)
Prerequisite: This course is limited to students admitted to the Nondestructive Testing Technician Apprenticeship Program.

Degree and Credit Status: Degree-Applicable Credit Course

Foothill GE: Non-GE
Transferable: None
Grade Type: Pass/No Pass Only
Repeatability: Not Repeatable

This course covers the principles of liquid penetrant testing and prepares students to understand the different products/equipment; select equipment and setup test equipment and area; understand the steps to conduct a test; and become familiar with codes and standards.

AATA 102B • PENETRANT TESTING LEVEL 2

Units: 1.5
Hours: 20 lecture per quarter (20 total per quarter)
Prerequisite: This course is limited to students admitted to the Nondestructive Testing Technician Apprenticeship Program.

Degree and Credit Status: Degree-Applicable Credit Course

Foothill GE: Non-GE
Transferable: None
Grade Type: Pass/No Pass Only
Repeatability: Not Repeatable

This course covers the application of liquid penetrant testing and prepares students to understand the different products/equipment; select equipment and setup test equipment and area; understand the steps to conduct a test; interpret and evaluate indications; and become familiar with standards and codes.

AATA 103A • ULTRASONIC TESTING LEVEL 1

Units: 3
Hours: 40 lecture per quarter (40 total per quarter)
Prerequisite: This course is limited to students admitted to the Nondestructive Testing Technician Apprenticeship Program.

Degree and Credit Status: Degree-Applicable Credit Course

Foothill GE: Non-GE
Transferable: None
Grade Type: Pass/No Pass Only
Repeatability: Not Repeatable

This course introduces the basic principles of ultrasonics and prepares the student for straight beam inspections and thickness measurement.

AATA 103B • ULTRASONIC TESTING LEVEL 2

Units: 3
Hours: 40 lecture per quarter (40 total per quarter)
Prerequisite: This course is limited to students admitted to the Nondestructive Testing Technician Apprenticeship Program.

Degree and Credit Status: Degree-Applicable Credit Course

Foothill GE: Non-GE
Transferable: None
Grade Type: Pass/No Pass Only
Repeatability: Not Repeatable

This course dives deeper into ultrasonic inspection, including flaw detection using angle beam inspection, application of immersion testing, weld testing, and evaluation and interpretation of codes and standards.

AATA 104A • ULTRASONIC PHASED ARRAY THEORY

Units: 3
Hours: 40 lecture per quarter (40 total per quarter)
Prerequisite: This course is limited to students admitted to the Nondestructive Testing Technician Apprenticeship Program.

Degree and Credit Status: Degree-Applicable Credit Course

Foothill GE: Non-GE
Transferable: None
Grade Type: Pass/No Pass Only
Repeatability: Not Repeatable

This course introduces the basic principles of ultrasonic phased arrays and prepares students to use phased array for ultrasonic examinations.

AATA 104B • ULTRASONIC PHASED ARRAY LABORATORY

Units: 1
Hours: 40 laboratory per quarter (40 total per quarter)
Prerequisite: This course is limited to students admitted to the Nondestructive Testing Technician Apprenticeship Program.

Degree and Credit Status: Degree-Applicable Credit Course

Foothill GE: Non-GE
Transferable: None
Grade Type: Pass/No Pass Only
Repeatability: Not Repeatable

Ultrasonic phased array testing laboratory, in which students will receive hands-on training using plates and pipes with embedded flaws. Students will be able to perform tests, analyze results, and categorize flaws.

AATA 105A • RADIOGRAPHIC TESTING LEVEL 1

Units: 3
Hours: 40 lecture per quarter (40 total per quarter)
Prerequisite: This course is limited to students admitted to the Nondestructive Testing Technician Apprenticeship Program.

Degree and Credit Status: Degree-Applicable Credit Course

Foothill GE: Non-GE
Transferable: None
Grade Type: Pass/No Pass Only
Repeatability: Not Repeatable

This course introduces the basic principles of radiography, radiation safety, physics of radiation, exposure, radiography film, and radiograph shots.

AATA 105B • RADIOGRAPHIC TESTING LEVEL 2

Units: 3
Hours: 40 lecture per quarter (40 total per quarter)
Prerequisite: This course is limited to students admitted to the Nondestructive Testing Technician Apprenticeship Program.

Degree and Credit Status: Degree-Applicable Credit Course

Foothill GE: Non-GE
Transferable: None
Grade Type: Pass/No Pass Only
Repeatability: Not Repeatable

This course prepares students to perform industrial radiography, including dark room facilities, image quality, indications, codes and standards.

AATA 105C • NON-FILM RADIOGRAPHIC TESTING

Units: 2.5
Hours: 30 lecture, 10 laboratory per quarter (40 total per quarter)
Prerequisite: This course is limited to students admitted to the Nondestructive Testing Technician Apprenticeship Program.

Degree and Credit Status: Degree-Applicable Credit Course

Foothill GE: Non-GE
Transferable: None
Grade Type: Pass/No Pass Only
Repeatability: Not Repeatable

In this course students will learn the advanced radiographic techniques of computed radiography and digital radiography.

AATA 105R • RADIATION SAFETY

Units: 3
Hours: 40 lecture per quarter (40 total per quarter)
Prerequisite: This course is limited to students admitted to the Nondestructive Testing Technician Apprenticeship Program.

Degree and Credit Degree-Applicable Credit Course

Status:

Foothill GE: Non-GE

Transferable: None

Grade Type: Pass/No Pass Only

Repeatability: Not Repeatable

This course teaches students how to work safely around radioactive materials and how to safely handle and store materials.