

AATA 105B: RADIOGRAPHIC TESTING LEVEL 2

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2023
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 & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Non-GE
Transferable:	None
Grade Type:	Pass/No Pass Only
Repeatability:	Not Repeatable

Description

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

Course Objectives

The student will be able to:

1. Perform RT tests
2. Develop or process film
3. Analyze results and interpret indications

Course Content

1. Dark room facilities
 - a. Facilities and equipment
 - b. Film loading
 - c. Protection of radiographic
 - d. Processing of film - manual
 - e. Automatic film processing
 - f. Film filing and storage
2. Radiographic image quality
 - a. Radiographic sensitivity
 - b. Radiographic contrast
 - c. Definition
 - d. Film graininess
 - e. Image Quality Indicators (IQI)
3. Viewing radiographs
 - a. Equipment
 - b. Acceptable densities
 - c. Film viewing considerations
 - d. Indications: Relevant and non-relevant
4. Unsatisfactory radiographs
5. Weldments and castings

- a. Welding discontinuities
 - b. Casting discontinuities
6. ASME V, Article 2
 - a. Sensitivity, geometrical unsharpness and density requirements, ASME V Table T-276/ASTM E-94 Standards
 - b. Application of RT to pressure vessels
 - c. ASME VIII

Lab Content

Not applicable.

Special Facilities and/or Equipment

1. Dummy source, caution tape, film, film viewer.
2. When taught via Foothill Global Access, on-going access to computer with email software and hardware; email address.

Method(s) of Evaluation

Methods of Evaluation may include but are not limited to the following:

Results of a written test
Results of practical test

Method(s) of Instruction

Methods of Instruction may include but are not limited to the following:

Discussion
Slideshow
Video
Demonstration
Hands-on training

Representative Text(s) and Other Materials

American Society for Nondestructive Testing. Personnel Training Publications: Radiographic Testing (RT), Classroom Training Book, 2nd ed.. 2016.

This text is still widely used within the industry and is the most current text used for training.

Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments

1. Reading: Read Chapter 17 - Application to Pressure Vessels
2. Writing: Complete Quiz 17 on page 105. Quiz results will be reviewed in class as a group

Discipline(s)

Industrial Maintenance