

# AATA 105R: RADIATION SAFETY

## Foothill College Course Outline of Record

Heading	Value
<b>Effective Term:</b>	Summer 2023
<b>Units:</b>	3
<b>Hours:</b>	40 lecture per quarter (40 total per quarter)
<b>Prerequisite:</b>	This course is limited to students admitted to the Nondestructive Testing Technician Apprenticeship Program.
<b>Degree &amp; Credit Status:</b>	Degree-Applicable Credit Course
<b>Foothill GE:</b>	Non-GE
<b>Transferable:</b>	None
<b>Grade Type:</b>	Pass/No Pass Only
<b>Repeatability:</b>	Not Repeatable

## Description

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

## Course Objectives

The student will be able to:

- Inform others of the safety area
- Understand radioactivity and the harmful effects of radiation
- Determine safety time, distance, and shielding
- Detect and measure radiation
- Operate exposure devices
- Understand safety procedures and transport rules
- Prevent accidents

## Course Content

- Module 1: Safety training of personnel
- Module 2: Ionizing radiation
- Module 3: Radioactivity
- Module 4: Harmful effects of radiation
- Module 5: How do time, distance, and shielding affect your personal dose?
- Module 6: How do we detect and measure this radiation?
- Module 7: How do radiography exposure devices operate?
- Module 8: What are the rules for transporting radioactive sources?
- Module 9: How can following safety procedures help us?
- Module 10: How and why do radiographic exposure accidents happen?

## Lab Content

Not applicable.

## Special Facilities and/or Equipment

- Examples of radiography exposure devices and radiation detection devices.
- 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

## Method(s) of Instruction

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

Discussion  
 Slideshow  
 Video  
 Demonstration

## Representative Text(s) and Other Materials

American Society for Nondestructive Testing. [ASNT Study Guide: Industrial Radiography Radiation Safety](#). 2022.

American Society for Nondestructive Testing. [Gamma Radiation Safety Study Guide, 2nd ed.](#). 1999.

The Gamma Radiations Safety Study Guide is still widely used within the industry and is the most current text used for training, as the principles and information regarding gamma radiation has not changed.

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

- [Reading: Read Chapter 3](#)
- [Writing: Complete Quiz 3 on page 41. Quiz results will be reviewed in class as a group](#)

## Discipline(s)

Industrial Maintenance