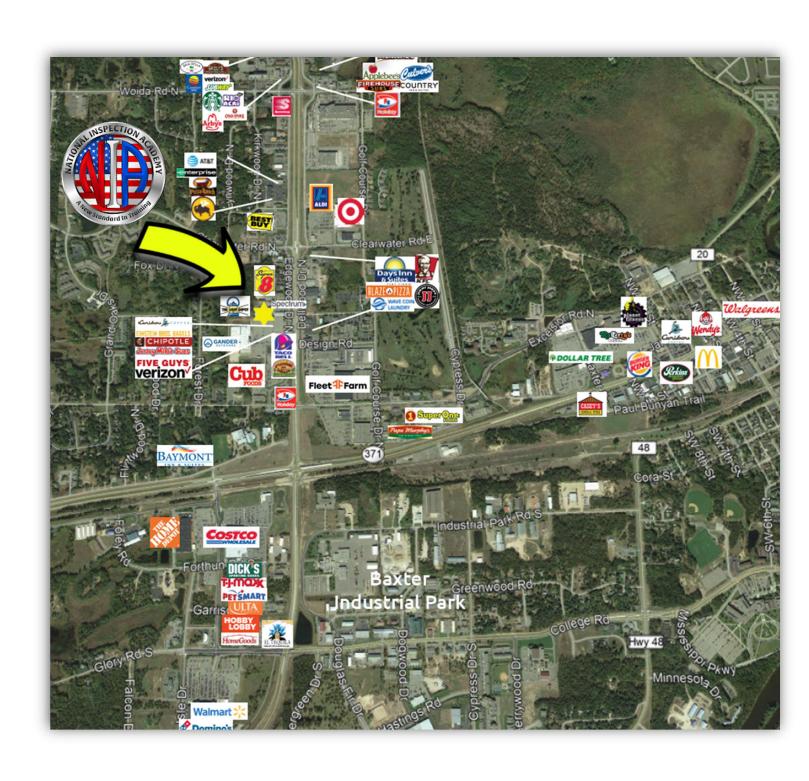




# 40 Hour Industrial Radiography Radiation Safety 2023

National Inspection Academy 14303 Edgewood Dr N #4, Baxter, MN 56425



NATIONAL INSPECTION ACADEMY 14303 EDGEWOOD DR N #4 BAXTER, MN 56425 This catalog is presented as general information only. Failure to read this publication does not excuse the student from the requirements and regulations described here in The National Inspection Academy reserves the right to alter or amend any item contained herein without notice. Effective January 1, 2023.

#### **OUR MISSION**

Provide quality cost-effective inspection training for the infrastructure, alternative energy, petrol-chemical, aerospace, and commercial industries. – NIA's activities will primarily consist of providing technical education in Nondestructive Testing (NDT), as well as preparation training for recognized inspection industry technical certifications.

2023

National Inspection Academy 14303 Edgewood Dr N #4 • Baxter, Minnesota 56474 U.S.A. Phone: (218) 851-8347

http://www.nationalinspection.org moulton@nationalinspection.org

# National Inspection Academy

#### **ABOUT US**

The National Inspection Academy (NIA) was founded by three of the Nondestructive Testing (NDT) industries top professionals, John Pariseau, Tom Stokke, and Brent Moulton. John, Tom, and Brent realized that there was a significant lack of quality NDT training within the industry and strove to develop a robust training package providing students with the in-depth comprehensive training desired by NDT companies.

We've achieved this by focusing on the specific needs of the industry and providing students with the necessary knowledge needed to excel in the field of nondestructive testing.

# **OUR PHILOSOPHY**

NIA is committed to helping individuals develop marketable NDT skills through quality training at minimum cost.

NIA strives to advance NDT training through modern educational tactics and materials providing students with a top tier education desired by employers.

The National Inspection Academy does not discriminate based on disability, race, color, religion, sex, national origin, or age.

#### **EMPLOYER IDENTIFICATION NUMBER**

NIA is a 501(c)3 nonprofit educational provider, EIN 87-4403422.

#### **NIA's INSTRUCTORS**

The National Inspection Academy features 3 ASNT level III instructors with over 60 years of combined practical NDT experience with backgrounds in a variety of industries including construction, power generation, aerospace, oil & gas, maritime, and defense.



Thomas Stokke

Operations Director, Co-founder



**John Pariseau**Executive Director, Co-founder



**Brent Moulton**Technical Director, Co-founder

#### INDUSTRIAL RADIOGRAPHY RADIATION SAFETY COURSE

Course length: 40 hours

This is a 40-hour industrial radiography radiation safety course designed to exceed the U.S. Nuclear Regulatory Commission (NRC) requirements for certification in industrial radiation safety (X-ray & Gamma). Students will be educated in the fundamentals of working safely around radiation emitting sources. Focus will be given to the transportation and storage of radioactive materials. The student will also learn and fully understand the ALARA concept. During the hands-on portion students will learn how to connect the source of radiation used as the emitting device and learn how to calculate barricade distances.



#### **COURSE OUTLINE**

#### **Discovery of radiation**

Introduction

The beginning of radiography

The benefits of early radiography

Radiation hazards

#### **Fundamentals of radiation**

The basics of atomic theory

## The atom

The periodic table

Types of radiation

# X-rays

Xray production

Xray tube

Types of x-ray equipment

Radiation safety requirements for x-ray

equipment

# **Gamma rays**

Discovery of alpha, beta and gamma

Nuclear decay

Origin of gamma rays

Activity

Half-life

Characteristics of gamma radiation

Gamma radiography

Storage, control, and disposal of

licensed material; and

Inspection and maintenance of

equipment.

#### **Radiations interaction with matter**

Ionization

Scatter

# **Radiation detection equipment**

Survey equipment

Survey meters

Personnel monitoring devices

Alarming rate meters

Use, operation, calibration

Limitations of radiation survey instruments

Survey techniques

Operation and control of radiographic

exposure equipment, remote

handling equipment, and storage containers

### **Biological effects of radiation exposure**

Discovery of biological effects

Units of radiation

Hazards of exposure to radiation

#### **Controlling radiation exposures**

Time

Distance

Shieldina

Half-life

Types of installations for X- and gamma

#### Regulations for X- or gamma ray radiography

Personnel responsibilities

Levels of radiation from licensed material

NRC regulations

#### Regulations specific to radioactive material

Daily and quarterly inspection and maintenance

Licensing requirements

Transportation requirements

Receiving and shipping sources

Physical protection of category 1 and 2

#### **Ethics**

Case histories of accidents in radiography

#### TRAINING OPTIONS

NIA's 40 Hour Industrial Radiography Radiation Safety program will give students the necessary knowledge to understand ionizing radiation and be able to work safely when performing radiographic exposures. The program provides two options. Option one is for individuals that are new to the industry or are seeking to advance their NDT career, this option consists of both the online training program and hands-on element hosted at the NIA laboratory. Option two is for companies with an established radiation safety program in which employees complete the NIA online training portion and the hands-on element is conducted by the employee's company Radiation Safety Officer (RSO).

#### **INDIVIDUAL ENROLLMENT**

Individuals may enrollfor the NIA 40 Hour Industrial Radiography Radiation Safety program. Once enrolled students will be logged into the NIA Learning



Management System (LMS) for the online element of the course. The online element is 32 hours in duration consisting of video lectures, reading assignments, practice quizzes, and a proctored final exam. Students that sign up for the individual enrollment that do not have a corporate sponsorship will be required to attend a one day practical hands-on element at our Baxter, MN facility. The hands-on element provides students with the opportunity to learn how to correctly use radiation survey and monitoring equipment, operate radiation emitting devices including safety checks, functionality, and connect/disconnect procedures. Students will also conduct practical exercises in calculating and establishing the required radiation boundaries based on various industry scenarios using mock radiation sources of various intensities, proper use of radiation detection and monitoring devices, transportation of radiation emitting devices, and requirements to ensure public safety.

#### **CORPORATE ENROLLEMENT**

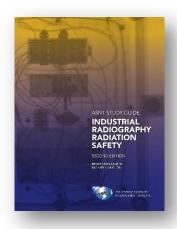
Corporations that seek a 40 Hour Industrial Radiography Radiation Safety program for their employees can contact NIA for student enrollment. Corporations can choose to have their employees attend NIA's hands-on portion and follow the individual enrollment process or may choose to provide their employees with the practical hands-on portion through their company RSO. Individuals which are provided the practical hands-on element through their company will require that the company RSO approve and sign the NIA course completion certificate identifying that they have provided the hands-on elemet. The NIA Radiation Safety course completion certification for the corporate option will consist of a dual signature block, one to identify the NIA RSO for completion of the online element and a second to be signed by the company RSO upon completion of the hands-on element. NOTE: A minimum 8 hours of hands-on training is required for the certificate to be valid.

#### **EQUIPMENT AND MATERIALS**

NIA will provide students with a copy of the ASNT Industrial Radiography Radiation Safety textbook upon enrollment. This textbook is a companion to the online training element and is required reading for course completion.

The hands-on elementprovided by NIA has been developed to simulate real world scenarios utilizing equipment commonly employed within the NDT industry for industrial radiography.

NIA is equipped with all the necessary equipment to provide hands-on practical education and equipment familiarity. This includes an inert exposure device, radiation signs, boundary rope, survey equipment and other items used in industrial radiography.



#### **FACILITIES**

The National Inspection Academy facility is a 3,332 square feet facility featuring all necessary equipment for hands-on training.

**Student Parking:** Parking is available in a private parking lot.

**Safety & Health Note:** Tobacco or electronic cigarette use are not permitted inside the facility. There are areas outside the facility designated for tobacco users. Complete safety and health information is provided during student orientation.

# 2023-2024 PROGRAM SCHEDULES

#### **ENROLLMENT DATES**

NIA's 40-hour Industrial Radiography Radiation Safety training course is a hybrid learning program where students can enroll any time throughout the year. The first portion of the course is online and on demand. The online material is a minimum 32 hours in duration. Upon completion of the online element students can schedule the practical hands-on element at the NIA facility in Baxter, MN or at their employer's facility depending on the training option at enrollment. Check the National Inspection class calendar for available training dates.

Standard hours of operation are 7 a.m. to 5 p.m., Monday through Friday.

#### INFORMATION AND POLICIES FOR TRAINING

# **VISITS**

Visitors are welcome anytime throughout the year. Students may schedule a visit by contacting us at 218-851-8347 or emailing us at moultion@nationalinspection.org to see our facilities, discuss enrollment.

#### **ADMISSION REQUIREMENTS**

Students must provide a government issued identification card (i.e., passport, driver license, etc.) Students must be at least 18 years old to participate.

Student must be capable of understanding, reading and speaking English.

#### **ADMISSIONS PROCESS**

- 1. Contact NIA at moulton@nationalinspection.org or call 218-851-8347.
- 2. Complete the Program Enrollment Agreement.
- 3. NIA will acknowledge receipt of the Program Enrollment Agreement.
- 4. Once financing has been received, students will be allowed to enroll in the Learning Management System by following the student portal directions.
- 5. Students are then able to begin the NIA online training element.

#### STUDENT PORTAL

Upon registration each student will be provided instructions on how to access the Student Portal. The Student Portal provides access to the online course material. It is important to review what is listed in the Student Portal to better understand, monitor, and participate in the educational process.

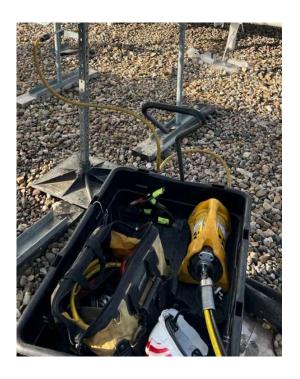
#### **ORIENTATION**

The National Inspection Academy will welcome students during the hands-on portion with a tour of the facility and cover the necessary safety requirements of the equipment being used.

#### **COURSE RESCHEDULING**

If the hands-on portion needs to be rescheduled contact an NIA staff member and scheduling can be adjusted.

Note: The hands-on portion is a required part of the 40-hour Industrial Radiography Radiation Safety course and must be completed before receiving a certificate of completion.



#### **GRADING**

Each student is graded based on course completion, attendance, and a final exam score.

**Online portion:** 100% completion is required before being assigned a hands-on date.

**Hands-on:** This is an 8-hour day of training that must be attended.

**Final Exam:** The final exam consists of 125 multiple choice questions, in a closed-book format. The examination is proctored and minimum score for passing is 70%.

#### PROGRAM GRADUATION POLICY

To graduate from the program, the student must successfully complete all required lessons, pass final examinations and meet all financial obligations.

#### **COURSE CERTIFICATES**

Individuals that complete the NIA 40-hour Industrial Radiography Radiation Safety training course and participate in the hands-on portion will receive a certificate of completion signed by the NIA RSO. Individuals that are sponsored by a corporation and that will have the hands-on completed by their employer's RSO will receive a dual certificate which shows completion of 32 hours of online training with a dual signature. One for completion of the online element signed by the NIA RSO and the second to be provided by the sponsoring company RSO stating that they facilitated the required 8 hours of hands-on training.

#### ATTENDANCE POLICY

All attendance and absences are recorded. Our attendance policy is being driven by industry and is expected by industry for the future employment of our students. Based on NIA and government agency standards, the objective is to have attendance and conduct at a level that will in no way cause an interruption in training. This will ensure the highest level of inspection skill at the completion of training. It is the responsibility of all students to follow NIA guidelines and rules.



Students are required to be on time for each class; to participate in each class and laboratory session; to honor break times; and to remain at the NIA facility through the completion of the daily scheduled program. Students are required to be in their assigned area.

Students are expected to notify the academy\_when they can't report at their scheduled time regardless of the reason. The only exception will be when an extreme emergency exists not permitting a phone call. The number to call is 218-851-8347.

Absences include personal illness, illness in the family, death in the family and legal matters (including incarceration), etc.

Students are expected to be in attendance for all classes.

Understand that absences, being tardy, leaving early, or cutting classes will be causes for interruptions or rescheduling classes, probation, suspension, or dismissal.

Attendance will be taken each morning of class. Attendance checkpoints are monitored at regular intervals throughout each class day.

#### LEAVE OF ABSENCE POLICY

A Leave of Absence (LOA) may be granted for unforeseeable circumstances such as, but not limited to, the following reasons: military obligations, jury duty, accidents, death in the family, etc. All LOA requests must be submitted in writing prior to taking the LOA and must be approved by the academy.

## **HOLIDAY SCHEDULE**

The National Inspection Academy will observe all US Federal Holidays listed below.

# 2023 Holiday Schedule

Date	Holiday
Monday, January 02	New Year's Day
Monday, January 16	Birthday of Martin Luther King, Jr.
Monday, February 20	Washington's Birthday
Monday, May 29	Memorial Day
Monday, June 19	Juneteenth National Independence Day
Tuesday, July 04	Independence Day
Monday, September 04	Labor Day
Monday, October 09	Columbus Day
Friday, November 10	Veterans Day
Thursday, November 23	Thanksgiving Day
Monday, December 25	Christmas Day

# **RULES AND REGULATIONS**

All rules and regulations at NIA are subject to review by the President or the Director of Education based on conditions and circumstances.

#### **DISCIPLINARY ACTION PROCEDURES**

NIA reserves the right to place on probation, suspend or dismiss any student based on unsatisfactory performance, absence, or failure to comply with published policies and/or the Student Code of Conduct.

The following action will be taken if policies and/or the Student Code of Conduct are violated:
First Violation – Verbal Discussion: A first violation will result in a discussion with the instructor regarding the violation that occurred to assist with any possible misunderstanding, to review the rules and to identify the consequences if there is any further violations.
Second Violation – Probation: A second violation will result in probation and a written record of the violation. Students will meet with two National Inspection administrative personnel to discuss the severity of the second violation. Probation will remain in effect until the student completes the program and the written record will become a permanent part of the student's file.



#### **DISCIPLINARY ACTION PROCEDURES**

Third Violation – Suspension: A third violation will result in a suspension from the current program. Based on course availability the student may not be able to resume the program until the course is offered which may be more than one month. If suspension occurs during a class, all remaining class time and certification attempts will be forfeited. A student returning from suspension will be financially responsible for the course at the individual course tuition rate.

Any additional infraction following the return from suspension will result in immediate dismissal from the program.

All students are expected to conduct themselves in a manner appropriate to a professional work environment. Considering the severity of the violation, immediate dismissal of the student may be necessary.

#### COPYRIGHT AND PEER-TO-PEER SHARING POLICY

The National Inspection Academy has implemented policies to deter copyright violations and unauthorized Peer-to-Peer (P2P) file sharing. This policy includes sanctions and disciplinary actions for violation of Federal copyright laws and P2P file-sharing violations.

#### PROBATION/SUSPENSION/DISMISSAL

NIA reserves the right to place on probation, suspend, or dismiss any student based on unsatisfactory performance, absence, or failure to comply with published rules. Any student involved in a fight or expressing violence is subject to immediate dismissal.

**Note:** Any student with an open container of alcohol, or drugs on academy grounds or appears to be under the influence of drugs or alcohol is subject to immediate dismissal. The use, sale, or possession of drugs will result in immediate dismissal and notification of the proper authorities.

#### **READMISSION**

A student who voluntarily withdraws may be readmitted by submitting a new Program Enrollment Agreement Form. A student who has been dismissed by NIA may request readmission in writing.

#### STUDENT COMPLAINT/GRIEVANCE PROCEDURES

In the event a student has concerns or complaints against the academy, the steps for filing the complaint and resolving the problem would be as follows:

Discuss the matter with his/her class Instructor.

Discuss with the Director of Education.

Should it become necessary, the individual may contact the board of directors.

A copy of the Commission's Complaint Form is available at the school and may be obtained by contacting the National Inspection Academy.

#### HOUSING AND MEALS

NIA does not provide campus housing. Securing housing is the responsibility of the student. NIA will provide a list of housing options available to the students. The housing list will be sent via email and can be provided by request. NIA does not endorse any of the listings and is not responsible for any related issues. Students will have an hour for lunch from 11:30 a.m. to 12:30 p.m.

NIA will not provide food services.

Students may bring their own food or there are several restaurants in the vicinity of the NIA facility.



The following information is provided and updated annually as directed by the U.S. Department of Education.

Reporting of Criminal Incidences. NIA strives to

provide a safe and secure environment for all students and staff members. All students and staff members are encouraged to report any and all suspicious campus activity immediately upon witnessing the occurrence.

**All students should report any knowledge of a criminal or suspicious nature to their instructor.** NIA will take appropriate action based upon the information given by the student or staff member. When deemed appropriate, local law enforcement authorities will also be notified.

**Security Program.** All students are informed of security procedures during orientation. All staff members are briefed on security procedures upon hiring. Both staff members and students are encouraged to be responsible for their own security and the security of those around them by understanding the security procedures and reporting any incidents when they occur to a safety/security team member.

**Policy Regarding Illegal Substances.** NIA strictly forbids the possession, use or sale of any alcoholic beverages and/or any drugs on all NIA property. Students and staff members should report any knowledge of such activities to the appropriate school personnel mentioned above in the "Reporting of Criminal Incidence".

Any infraction is cause for immediate suspension and possible dismissal. When appropriate, such infractions will also be reported to the local authorities.





**Anti-Hazing Policy.** Hazing is defined as any action or situation which recklessly or intentionally endangers the mental or physical health or safety of a student.

"Hazing" means doing any act or coercing another, including the victim, to do any act of initiation into any student or other organization or any act to continue to reinstate membership in or affiliation with any other organization that causes or creates a substantial risk of causing mental or physical harm to any person, including coercing another to consume alcohol or a drug of abuse.

Hazing includes, without limitation, the following as determined by the Academy: any brutality of a physical nature, such as whipping, beating, branding, or exposure to the elements; forced consumption of any food, alcohol, drug or other substance; forced physical activity which could adversely affect the physical health or safety of a student; any activity which would subject a student to extreme mental stress, such as sleep deprivation, forced exclusion from social contact, forced conduct which could result in extreme embarrassment; or any forced activity which could adversely affect the mental health or dignity of a student.

The safety of our students, staff and faculty are a top priority at the National Inspection Academy. NIA depends on administrators, faculty, staff, and students to identify acts of behavior that may be of concern so NIA staff can take appropriate actions to assist those affected. All are responsible for campus safety. Hazing is considered a violation of the Student Code of Conduct. Failure to comply with this policy will result in disciplinary action including, potentially, dismissal from the Academy.

**Domestic Violence Policy.** Reports regarding domestic violence should be directed to the Baxter Police Department. **Missing Person Policy.** Reports regarding a student who is believed to be missing should be directed to the Baxter Police Department.

#### **HEALTH AWARENESS**

Individuals with a pacemaker or defibrillator are restricted from entering magnetic particle, magnetic flux leakage labs and other high voltage areas due to potential risk of electric shock and/or high frequency interfering with the pacemaker or defibrillator signal.

Students are responsible for their own medical care and insurance expenses. Students are not covered by NIA insurance or industrial compensation.

Vaccinations are not required as a condition of enrollment at NIA.

#### **TOBACCO-FREE POLICY**

NIA is committed to providing a safe and healthy environment for all students and visitors at our campus. Smoking and vaping use of any kind is prohibited inside and within 25 feet of the NIA facility. A designated outdoor smoking area is located on the north side of the NIA facility.

#### DRUG AND ALCOHOL FREE CAMPUS

NIA promotes the health, safety and effectiveness of our students. In doing so, we expect students to



report to school mentally and physically prepared to learn. This requires students to abstain from using substances that could alter their performance prior to or during scheduled classes.

Controlled substances include, but are not limited to narcotics, depressants, amphetamines, and hallucinogens. A violation may result in disciplinary action up to and including dismissal. Local law enforcement will be immediately notified of any incident involving a student under the age of 21 or pertaining to the involvement of controlled substance.

#### WEAPON FREE POLICY

NIA has a Weapon Free Policy, no person shall possess, have under their possession or control, convey or attempt to convey, a deadly weapon or dangerous ordnance onto the NIA facility premises. This includes other potentially dangerous weapons, explosives, combustibles, or dangerous chemicals, or the possession of any other objects used with the intent to damage, injure, or disrupt NIA activities.

#### DRESS CODE POLICY

Our goal is to ensure the safety and professional appearance of all students attending the National Inspection Academy. The following Dress Code is required at all times:

All shirts must have sleeves and be free of tears or holes. All pants must be free of tears or holes.

Clothing may not display obscene language, graphics or pictures.

Closed toed shoes are required.

#### PERSONAL PROTECTIVE EQUIPMENT

The Personal Protective Equipment (PPE) Program is an OSHA requirement. PPE is equipment worn to minimize exposure to hazards that can cause injuries and illness. All students, visitors, and personnel will be provided and are required to wear the appropriate PPE when in the inspection labs and dark room areas.

# FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT

The Family Educational Rights & Privacy Act (FERPA) is

a federal law that protects the privacy of student education records by providing students access to their educational records, an opportunity to seek to have the records amended and some control over the disclosure of information from the records.

The National Inspection Academy will only provide grades, attendance, and financial aid information to people that the student authorizes.



# CONTACT

National Inspection Academy 218-851-8347 moulton@nationalinspection.org 14303 Edgewood Dr N #4, Baxter, MN 56425





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