

# INSPECTION TECHNOLOGIES, NONDESTRUCTIVE TESTING TECHNOLOGY, CERTIFICATE OF TECHNOLOGY



## Program Information

A career in Inspection and Testing covers many methods, both destructive and nondestructive. The Inspection Technologies program at San Jacinto College allows you to follow your career path with traditional Nondestructive Testing (NDT) methods or the Inspection of Fixed Equipment such as Pressure Vessels, Piping, Valves, and Metallurgical testing.

These careers are in high demand and pay according to the skill level you attain through education and experience. These skill levels require the type of training you can receive through the Inspection Technologies program at San Jacinto College. Job opportunities are diverse, so pick your industry or career path. Graduates may work in industries such as: petrochemical, oil and gas, fabrication, welding, pipeline, turbines, aerospace, and more.

San Jacinto College offers a one-year Certificate of Technology, a second year of advanced courses to earn an Associate of Applied Science (AAS) degree, or Level 2 Certificate paths for year 2, in two career paths: Nondestructive Testing (NDT) or Fixed Equipment Inspection. The program offers courses in the evenings and on Saturdays to accommodate your work schedule.

We provide the education to follow certification paths through: the American Society for Nondestructive Testing (ASNT), the American Petroleum Institute (API), the American Welding Society (AWS), and the National Association of Corrosion Engineers (NACE) International.

## Test Methods

Ultrasonic Testing (UT)

Phased Array Ultrasonics (PAUT)

Eddy Current Testing (ET)

Liquid Penetrant Testing (PT)

Magnetic Particle Testing (MT)

Visual Inspection (VT)

Radiographic Film Interpretation (RFI)

Metrology and Prints

Metallurgy Testing: Charpy, Tensile, Hardness and PMI

Corrosion Inspection

Welding Inspection (CWI)

Pressure Vessel Inspection

Piping and Valve Inspection

## Career Opportunities

Graduates of San Jacinto College's Inspection Technologies program may find employment as:

- NDT Technicians in: VT, PT, MT, UT, ET, and RFI;
- UT Flaw Sizing and Phased Array Inspectors PAUT;
- AWS - Certified Welding Inspectors (CWI);
- API Inspectors - API 510, API 570, API 577/578;
- Quality Technicians, Inspectors, or Managers; and
- Metallurgical, Corrosion, or Coating Technicians.

## Earning Potential

Wages are based upon experience, skill level, testing method, and a synergy of multiple certifications.

Median Wages Per Year:

NDT Level I \$74,392<sup>1</sup>

NDT Level II \$104,931<sup>1</sup>

NDT Level III \$130,096<sup>1</sup>

Certified Welding Inspector \$124,797<sup>1</sup>

API Inspector \$150,703<sup>1</sup>

<sup>1</sup> Personnel for Quality and Nondestructive Testing (PQNNT) Salary Survey, 2019, for South Central Region (Texas, Louisiana, Oklahoma, New Mexico, Arkansas, and Missouri) [most recent data]

For additional information, students may contact the Department Chair Joseph Zwiercan at 281-478-2799 or 281-998-6150 x1352

or the Program Director, Stephen Rowland at 281-998-6150 x1689.

## Campus

Central Campus

## Information

Students pursuing the Nondestructive Testing Technologies (NDT) program courses can earn the technical training necessary to begin working in the testing and inspection field.

This certificate offers classroom and lab training in:

- VT - Visual Inspection,
- MT - Magnetic Particle Testing, and

- PT - Liquid Penetrant Testing, UT - Ultrasonic Testing, Radiographic Film Interpretation, and Corrosion in conformance with the guidelines of American Society for Nondestructive Testing SNT-TC-1A (ASNT), American Welding Society (AWS), and NACE International.

Additional coursework in Standards and Codes, Metrology and Prints, and Metallurgy provides the foundations needed for adaptability and success in the workplace. The training prepares students for an entry-level career in Nondestructive Testing.

## Admission

No admission requirements.

Job entry requirements:

- Pass a drug test on a regular basis;
- Pass a criminal background check;<sup>1</sup>
- Some career paths require a TWIC Card; and
- Some career paths require a good driving record.

<sup>1</sup> Requirements vary based on type of offense and years since the offense or the requirements of the facility where the work is being performed.

## Plan of Study

4INSP-NDT

First Term		Credits
QCTC 1470	Introduction to the Inspection Industry	4
METL 1313	Introduction to Corrosion	3
NDTE 1410	Liquid Penetrant, Magnetic Particle and Visual Testing: Level I & II	4
QCTC 1448	Metrology and Prints	4
Credits		15
Second Term		
QCTC 2331	Standards and Codes	3
NDTE 1301	Radiographic Film Interpretation of Weldments	3
NDTE 1405	Introduction to Ultrasonics: Level I & II	4
METL 1401	Introduction to Metallurgy	4
Credits		14
Total Credits		29

Capstone Experience: METL 1401 Introduction to Metallurgy