

INSPECTION TECHNOLOGIES, NONDESTRUCTIVE TESTING TECHNOLOGY, ASSOCIATE OF APPLIED SCIENCE



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 \$74,392¹
- NDT Level II \$104,931¹
- NDT Level III \$130,096¹
- Certified Welding Inspector \$124,797¹
- API Inspector \$150,703¹
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¹ 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 281-478-2799.

Campus

Central Campus

Information

Students pursuing the Nondestructive Testing Technology Associate of Applied Science (AAS) degree can earn the technical training necessary to begin working in the testing, inspection, and quality fields.

San Jacinto College offers classroom training in:

- VT - Visual Inspection,
- MT - Magnetic Particle Testing,
- PT - Liquid Penetrant Testing,
- UT - Ultrasonic Testing,
- ET - Eddy Current Testing, and

- RFI - Radiographic Film Interpretation, in conformance with the American Society for Nondestructive Testing SNT-TC-1A guidelines.

Additional coursework in Standards, Metallurgy, Metrology, and Advanced Ultrasonics provides the foundations needed for the diversity and adaptability of skills needed in the workplace.

This training prepares students for entry-level work in Nondestructive Testing, Inspection, and Quality careers in such industries as petrochemical, fabrication, maintenance, construction, turbine and aviation, machining, metal working, quality labs, and metallurgical testing.

Admission

No admission requirements.

Job entry requirements:

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

¹ 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

3INSP-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		Credits
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
Summer Year One Term		Credits
MATH 1332 or MATH 1314 Reasoning) ¹ or College Algebra	Contemporary Mathematics (Quantitative Reasoning) ¹ or College Algebra	3
Credits		3
Third Term		Credits
NDTE 1454	Intermediate Ultrasonics: Flaw Detection and Sizing	4
NDTE 1440	Eddy Current Testing	4
Select one of the following:		3
SPCH 1311	Introduction to Speech Communication	
SPCH 1315	Public Speaking	
SPCH 1318	Interpersonal Communication	
SPCH 1321	Business and Professional Speech	

Language, Philosophy and Culture (Humanities) or Creative Arts (Fine Arts)		3
Credits		14
Fourth Term		Credits
NDTE 2411 or WLDG 2455	Welding Inspection or Advanced Metallurgy	4
NDTE 2401	Advanced Ultrasonics: Phased Array and A.U.T.	4
ENGL 1301	Composition I	3
Social and Behavioral Sciences		3
Credits		14
Total Credits		60

Capstone Experience: NDTE 2401

¹ May use MATH 1314 College Algebra if transferring to a baccalaureate program.