

CPCC's NDET Program

Examples of courses to be offered in this program are:

NDE 110 Introduction to Nondestructive Examination

NDE 112 Materials and Processes

PHY 131 Physics - Mechanics

WLD 141 Symbols and Specifications

NDE 121 Principles of Ultrasonics (UT)

NDE 141 Principles of Penetrant Testing (PT)

NDE 151 Principles of Magnetic Particle Testing (MT)

NDE 122 Ultrasonic Examination using Angle Beams

NDE 131 Radiation Safety and Principles of Radiography (RT)

NDE 251 Industrial Applications of PT and MT

NDE 221 UT Industrial Applications

NDE 232 RT Industrial Applications

NDE 222 Advanced UT

NDE 210 Procedure Development



Get There.

CENTRAL PIEDMONT COMMUNITY COLLEGE

P.O. Box 35009 • Charlotte, North Carolina • 28235-5009

Non-Destructive Examination Technology

Central Piedmont Community College is an equal opportunity/affirmative action institution. Reasonable accommodations will be provided for individuals with disabilities upon request, 10 working days in advance of the event. Call 704.330.6424. CPCC is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia 30033-4097; Telephone number 404-679-4501) to award associate degrees, diplomas, and certificates. 5,000 copies of this document were produced at a cost of \$69750 or \$.14 per piece. CPCC 3664. Vision: Central Piedmont Community College intends to become the national leader in workforce development.

www.cpcc.edu/ndet

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ASSOCIATE'S DEGREE PROGRAM



Non-Destructive Examination Technology



Get There.

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Are you a welder or engineer? Learn Non-Destructive Examination and add an extra skill set to your toolkit or begin a career in a high-demand industry!

What is non-destructive examination (NDE)?

Non-destructive examination is a form of examining a material or part without damaging the intended usefulness of the component. Unlike destructive examination, where the part is destroyed as a part of the examination, NDE methods are applied to find hidden indications of potential flaws. These are then compared to standards, established by sound engineering principles, to determine if the part can continue in service. NDE is often a routine part of design, manufacture and in-service testing performed to better establish and assess the reliability of the part in its design function.

In many cases, NDE is applied to establish the properties of a 'new' material. For example, new composite materials for aerospace are engineered products and as such, have indeterminate properties. NDE can be applied to these materials to aid in the assessment of their integrity and establish specifications to which subsequent new materials should be manufactured to assure application reliability.

What are its valuable uses?

- Establishing material properties
- Aiding in product design
- Controlling manufacturing processes
- Maintaining uniform quality
- Applicable across a multitude of industries
- Value added benefits
- Preventing accidents and saving lives

Jobs that use this skill

NDE is universally applied across many industries. As a result, the methods are diverse and applicable to a whole host of components. Applications include:

- Visual examination of bolting, valves, and welds
- Surface examination of vessels, weld preps, and castings
- Volumetric examination of welds, heat exchanger tubing and fiberglass reinforced plastics

Industries where NDE is applied include:

- Aerospace
- Transportation – railroads, ships and bridges
- Power generation – fossil, hydroelectric and nuclear
- Petrochemical
- Pulp and paper
- Research – university and industrial

CPCC's NDET Program

Admissions and other requirements for the associate degree program are similar to those for other technology careers, plus some additions.

- Completion of a high school diploma or equivalent is required.
- A CPCC placement test in English and mathematics is required. Developmental classes in mathematics and English courses are available for students to build basic skills and knowledge.
- A counseling/orientation appointment follows placement testing.

ADDITIONAL INFORMATION

For information on the field of non-destructive examination, including career opportunities, visit www.asnt.org and www.ndted.org

**For more information on CPCC's new NDET program, contact:
Anver Classens at 704.330.4428
anver.classens@cpcc.edu**

or

**Robert Smilie at 704.330.4434
robert.smilie@cpcc.edu**



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