

CURRICULUM STANDARD

Effective Term
Summer 2010
[2010*02]

Curriculum Program Title

Nondestructive Examination Technology

Code

A50350

Concentration

(not applicable)

Curriculum Description

The Nondestructive Examination (NDE) Technology curriculum prepares students for careers in nondestructive assessment of materials, equipment, and/or components. NDE test methods assess an object's usefulness without affecting its function. NDE is used in many industries, including construction, energy, and aerospace.

Course work includes ultrasonics, radiography, and penetrant and magnetic particle testing. Applied math and physics are an integral part of NDE and the curriculum. Students will gain knowledge of these methods through applied theory and co-op work experiences.

The NDE curriculum will meet the qualification requirements of ASNT SNT-TC-1A, permitting graduates to obtain NDE certification after a few months of on-the-job experience. Career opportunities exist in applied NDE, material sciences, technical sales, and quality control in many industries.

Curriculum Requirements*

[for associate degree, diploma, and certificate programs in accordance with 23 NCAC 02E.0204 (3)]

- I. General Education.** Degree programs must contain a minimum of 15 semester hours including at least one course from each of the following areas: humanities/fine arts, social/behavioral sciences, and natural sciences/mathematics. Degree programs must contain a minimum of 6 semester hours of communications. Diploma programs must contain a minimum of 6 semester hours of general education; 3 semester hours must be in communications. General education is optional in certificate programs.
- II. Major Hours.** AAS, diploma, and certificate programs must include courses which offer specific job knowledge and skills. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit. *(See second page for additional information.)*
- III. Other Required Hours.** A college may include courses to meet graduation or local employer requirements in a certificate, diploma, or associate in applied science program. These curriculum courses shall be selected from the Combined Course Library and must be approved by the System Office prior to implementation. Restricted, unique, or free elective courses may not be included as other required hours.

	AAS	Diploma	Certificate
Minimum General Education Hours	15	6	0
Minimum Major Hours	49	30	12
Other Required Hours	0-7	0-4	0-1
Total Semester Hours Credit in Program	64-76	36-48	12-18

**Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic use of computers.*

Major Hours

[ref. 23 NCAC 02E.0204 (3)]

- A. Core.** The subject/course core is comprised of subject areas and/or specific courses which are required for each curriculum program. A diploma program offered under an approved AAS program standard or a certificate which is the highest credential level awarded under an approved AAS program standard must include a minimum of 12 semester hours credit derived from the subject/course core of the AAS program.
- B. Concentration** *(if applicable)*. A concentration of study must include a minimum of 12 semester hours credit from required subjects and/or courses. The majority of the course credit hours are unique to the concentration. The required subjects and/or courses that make up the concentration of study are in addition to the required subject/course core.
- C. Other Major Hours.** Other major hours must be selected from prefixes listed on the curriculum standard. A maximum of 9 semester hours of credit may be selected from any prefix listed, with the exception of prefixes listed in the core or concentration. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit.

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	AAS	Diploma	Certificate
Minimum Major Hours Required	49 SHC	30 SHC	12 SHC
A. CORE <i>Courses required for the diploma are designated with *</i> Required Courses: * NDE 110 Intro to Nondestr Exam 3 SHC * NDE 112 Materials and Processes 3 SHC * NDE 121 Prin of Ultrason Exam UT 4 SHC * NDE 122 Angle Beam Examination 4 SHC NDE 131 Rad Safety & Prin of RT 4 SHC NDE 141 Surface Testing (VT/PT) 3 SHC NDE 151 Electromag Test (ET/MT) 3 SHC Required Subject Areas: None	24 SHC	14 SHC	
B. CONCENTRATION <i>Courses unique to the concentration are designated with **</i>			
C. OTHER MAJOR HOURS <i>To be selected from the following prefixes:</i> CIS, COE, CSC, DFT, EGR, ELC, MAC, MAT, MEC, NDE, PHY, and WLD <i>Foreign language courses (including ASL) that are not designated as approved other major hours may be included in all programs up to a maximum of 3 semester hours of credit.</i>			