NON-DESTRUCTIVE TESTING

2018 – 2019 • Applied Science and Engineering Technology Division

This is a course of study that will cover the basic concepts of the five major non-destructive testing (NDT) methods: visual testing (VT), liquid penetrant testing (PT), magnetic particle testing (MT), ultra sonic testing (UT) and radiographic testing (RT). The classroom hours, grading criteria and test composition associated with this coursework are established in accordance with the American Society for Nondestructive Testing (ASNT): Recommended Practice SNT-TC-1A. The certificate offerings are broken into a basic and advanced certificate, enabling students to pursue their desired level of expertise in the non-destructive testing field. The current offerings are directly relevant to both welding and nuclear technology associate of applied science degree majors.

Non-destructive testing involves the inspection, testing or evaluation of materials, components and assemblies for materials' discontinuities, properties and machine problems without further impairing or destroying the parts serviceability. Universally, the term NDT applies equally to the NDT inspection methods used for evaluation.

Special Knowledge and Training Required for Evolving Industry

It is recognized that the effectiveness of non-destructive testing application depends upon the capabilities of the personnel who are responsible for and perform NDT. The courses are in accordance with SNT-TC-1A that has been prepared by ASNT to establish guidelines for the qualification and certification of NDT personnel whose specific jobs

require appropriate knowledge of the technical principles underlying the non-destructive tests they perform, witness, monitor or evaluate. Through course progression, the student gains a general knowledge of how to apply NDT testing methods and develops a deeper understanding of how non-destructive testing impacts the world in which we live.

Significant Job Growth Projected

There is a need for highly trained and certified non-destructive testing technicians worldwide. More opportunity exists for NDT professionals today than ever before. The American Society for Nondestructive Testing is one the world's largest technical societies for non-destructive testing professionals.

Career Opportunities

Graduates of this program will be prepared for entry-level employment in the following areas:

- NDT technician
- Non-destructive testing evaluator
- Nuclear engineering technician
- Quality control technician
- Welding inspector

Certificate Program: Non-Destructive Testing (NDT) Technician-Basic

MCCC offers a certificate program that concentrates on the basic and intermediate core competencies required to prepare the student for an ASNT Level I or II position in the non-destructive testing field.

Required Courses	Credits 14
MATL 101 (Industrial Materials)	3
NUET 102 (Introduction to Non-Destructive Testing)	3
NUET 103 (Liquid Penetrant & Magnetic Particle Testing)	2
NUET 104 (Visual Testing)	2
WELD 100 (Introduction to Welding)	4

Total Certificate Requirements **14 credits**

Total Certificate Cost **19 minimum billable contact hours**

Certificate Program: Non-Destructive Testing (NDT) Technician-Advanced

Required Courses	Credits 11
ELEC 125 (Fundamentals of Electricity)	3
NUET 105 (Radiography – Level I)	2
NUET 106 (Radiography – Level II)	2
NUET 107 (Ultrasonic – Level I)	2
NUET 108 (Ultrasonic – Level II)	2

Total Certificate Requirements **11 credits**

Total Certificate Cost **16 minimum billable contact hours**

Note: Students graduating from both the existing nuclear engineering technology and welding programs can broaden their employability chances after completion of the ASNT certificate.

Note: Completion of the MCCC certificate program in non-destructive testing does not complete the ASNT certification requirements. ASNT certification requires further hours of field experience working under a certified inspector. These hours may vary depending on the inspection method. The MCCC NDT program will satisfy classroom requirements for certification.

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