INDUSTRIAL TRADES

Non-Destructive Testing Technician

CERTIFICATE

- One year
- September start
- Port aux Basques Campus

COURSES

CODE	TITLE	
Block 1	**Entry Level**	**Hrs**
MA1080	Math for NDT	60
TS1510	Occupational Health and Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
CM2150	Workplace Communications	45
MC1050	Introduction to Computers	30
ND1110	Liquid Penetrant Inspection	80
ND1130	Materials and Process	95
ND1210	Magnetic Particle Inspection	100
Block 2		**Hrs**
DR1770	Basic Drawing and Sketching for NDT	30
SP2330	Quality Assurance/Quality Control	30
ND1310	Industrial Ultrasonics I	110
ND1311	Industrial Ultrasonics II	110
WD1290	SMAW for NDT	30
MR1220	Customer Service	30
ND1500	Radiation Safety and CEDO	60
SD1710	Job Search Techniques	15
Block 3		**Hrs**
SD1700	Workplace Skills	30
SD1720	Entrepreneurial Awareness	15
ND1410	Industrial Radiography I	80
ND1411	Industrial Radiography II	80

Non-Destructive Testing Technician graduates are employed to accurately test items for potential flaws/failures using the following procedures: Liquid Penetrant Inspection, Magnetic Particle Inspection, Ultrasonic's Testing and Radiography Testing.

The Non-Destructive Testing Technician program prepares learners for potential employment in areas from oil and gas, aerospace, nuclear, automotive, welding and steel production to other industrial sectors. The program will prepare you to write the National Exams that are required by the Canadian General Standards Board.

Graduates are involved with the accurate testing of materials and equipment to ensure the safe operation of various industrial environments.

Note:

1. There are specific vision requirements that are required by the Canadian General Standards Board prior to completing final certification in each discipline. Please refer to the following link for the requirements: http://www.nrcan-rncan.gc.ca/mms-smm/ndt-end/eli-adm/vis-vis-eng.htm
2. The Canadian General Standards Board exam fees are not included in tuition/supply fees.

SUBJECT DESCRIPTIONS:

Magnetic particle Inspection (MPI) trains students to use small magnetic particles (i.e. iron filings) to detect flaws in components. For this method to be used the component must be made of ferromagnetic material such as iron, nickel, cobalt, or some of their alloys.

Liquid Penetrant Inspection (LPI) trains students to recognize surface flaws in components that appear as a result of capillary action. Flaws become apparent when a colored or fluorescent dye bleeds out of the component to reveal a crack in its surface.

Ultrasonic Testing (UT) trains students to use high frequency sound energy to conduct examinations and make measurements in materials to determine surface or internal cracks or flaws in the materials.

Radiography Testing (RT) trains students to send radioactive energy through a material enabling a negative (Photo) to be produced for that material illustrating internal flaws or cracks.

OUTCOMES

1. Perform Liquid Penetrant Inspection.
2. Perform Magnetic Particle Inspection.
3. Carry out Ultrasonic Inspection.
4. Carry out Radiographic Inspection.
5. Acquire basic knowledge of Quality Assurance, Control Documentation and Reporting Systems for various industrial sectors.
6. Develop attitudes conducive to the successful application of skills on the job.
7. Develop an awareness and concern for good safety practices in the work place.
8. Develop academic skills and knowledge in mathematics, communications and science.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School
High School Graduation

2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science (Transition) Certificate

3. Adult Basic Education
Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:
i. Mathematics MA3107A, MA3107B, MA3107C
ii. Science 3101, 3102, 3103

4. Mature Student Status
Applicants who do not meet the educational prerequisites, are 19 years of age or older and have been out of school for at least one year, may be considered on an individual basis under the Mature Student Clause.

EQUIPMENT REQUIRED FOR TRIANING

Safety glasses, safety boots, and laboratory coats and gloves (latex or nitrile).

LABORATORY

Time will be split between practical applications and the classroom throughout the program to assist the trainees in developing self-confidence/skills to carry out Non-Destructive Testing certification exams.

EMPLOYMENT OPPORTUNITIES

You may find employment with pipeline, refinery and other oil and gas companies, construction companies, aircraft manufacturing, metal fabrication companies.