



NOVA SCOTIA  
**APPRENTICESHIP**  
AGENCY

# **NOVA SCOTIA** **CURRICULUM STANDARD** **INDUSTRIAL COATINGS** **APPLICATOR**

Based on the Nova Scotia Occupational Standard



**Nova Scotia  
Curriculum Standard**

**Industrial Coatings Applicator**

## Preface

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This Nova Scotia Curriculum Standard (NSCS) is intended to assist instructional staff in the design and delivery of technical, in-class training in support of the apprenticeship program.

This NSCS contains all the technical training elements required to complete the apprenticeship program and has been developed based on the 2025 Nova Scotia Occupational Standard (NSOS) for the trade.

Implementation of the NSCS for Apprenticeship training is outlined in the following table.

<b>Level</b>	<b>Implementation Effective</b>
Level 1	2026-2027
Level 2	2027-2028
Level 3	2028-2029

The above implementation schedule was current at time of publication.

Granting of credit or permission to challenge level examinations (if applicable) for pre-apprenticeship training for this trade will be based on the content outlined in this standard. Training providers must contact the Nova Scotia Apprenticeship Agency for more information on the process and requirements for determining eligibility for credit towards an apprenticeship program.

## Acknowledgements

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IUPAT DC 39

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## User Guide

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Nova Scotia Curriculum Standards (NSCS) are developed based on Red Seal Occupational Standards (RSOS) or Nova Scotia Occupational Standards (NSOS) and industry consultation. This document represents the minimum content to be delivered as part of the apprenticeship program for this trade.

The NSCS documents are purposefully constructed for ease of use and flexibility of structure to adapt to all delivery requirements. They detail units of training, unit outcomes and objectives. They do not impose a delivery model or teaching format.

Training providers will select and develop delivery materials and techniques that accommodate a variety of learning styles and delivery patterns. The NSCS does not dictate study materials, textbooks or learning activities to be used in delivery.

### Structure

The content of the NSCS is divided into units, and it contains a Level Structure to facilitate mobility for apprentices moving from one jurisdiction to another. Unit codes are used to identify, not to convey the order of delivery. It is at the discretion of the training provider to deliver the content in the required logical sequence of delivery within the level. Units may be delivered one at a time or concurrently within a level; all outcomes must be met.

The Learning Outcomes: describe what the apprentice should know or be able to do at the end of training. Wording of the Learning Outcomes:, “Demonstrate knowledge of...” acknowledges the broad spectrum of ways in which knowledge can be assessed (i.e. practical projects, multiple choice testing, presentations, etc.) by instructional staff within the training.

The Occupational Standard (OS) to Curriculum Comparison chart maps the OS trade skills/sub-tasks to the curriculum standard. Each unit of training in the curriculum standard lists both theoretical and Practical Objectives:, which represent the minimum content that must be covered during technical training. Detailed content/bulleted lists for each objective have not been developed. Where detail is required for clarity, content has been provided.

The Practical Objectives: represent the tasks/skills that apprentices must be exposed to during technical training. An individual or group performance of the task/skill is recommended; if not possible, an instructor demonstration is acceptable. Training Providers should use practical, hands-on learning whenever possible, whether identified in the curriculum standard as a practical objective or not. As well, each unit provides Suggested Hours: (a guide only), which can be adjusted for apprentice learning, delivery methods, practical/hands-on learning, examinations, registration, holidays, storm days, etc.

## Glossary of Terms

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These definitions are intended as a guide to how language is used in the document.

<b>ADJUST</b>	To put in good working order; regulate; bring to a proper state or position.
<b>APPLICATION</b>	The use to which something is put and/or the circumstance in which an individual would use it.
<b>CHARACTERISTIC</b>	A feature that helps to identify, tell apart or describe recognizably; a distinguishing mark or trait.
<b>COMPONENT</b>	A part that can be separated from or attached to a system; a segment or unit.
<b>DEFINE</b>	To state the meaning of (a word, phrase, etc.).
<b>DESCRIBE</b>	To give a verbal account of; tell about in detail.
<b>EXPLAIN</b>	To make plain or clear; illustrate; rationalize.
<b>IDENTIFY</b>	To point out or name objectives or types.
<b>INTERPRET</b>	To translate information from observation, charts, tables, graphs and written material.
<b>MAINTAIN</b>	To keep in a condition of good repair or efficiency.
<b>METHOD</b>	A means or manner of doing something that has procedures attached to it.
<b>OPERATE</b>	How an object works; to control or direct the functioning of.
<b>PROCEDURE</b>	A prescribed series of steps taken to accomplish an end.
<b>PURPOSE</b>	The reason for which something exists or is done, made or used.

## Glossary of Terms (continued)

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<b>SERVICE</b>	<p>Routine inspection and replacement of worn or deteriorating parts.</p> <p>An act or business function provided to a customer in the course of an individual's profession (e.g., haircut).</p>
<b>TECHNIQUE</b>	<p>Within a procedure, the manner in which technical skills are applied.</p>
<b>TEST</b>	<p>v. To subject to a procedure that ascertains effectiveness, value, proper function or other quality.</p> <p>n. A way of examining something to determine its characteristics or properties, or to determine whether or not it is working correctly.</p>
<b>TROUBLESHOOT</b>	<p>To follow a systematic procedure to identify and locate a problem or malfunction and its cause.</p>

## Skills for Success Summary

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Skills for Success are needed in a quickly changing world for work, learning and life. They are foundational for building other skills and important for effective social interaction. Everyone benefits from having these skills as they help individuals get and sustain employment. They also help individuals become active members of their community and succeed in learning.

Through extensive research and consultations, the Government of Canada launched the new Skills for Success model renewing the previous Essential Skills framework to better reflect the needs of the current and future labour market.

The summary presented here is based on existing Essential Skills profiles and will be updated to align with the new [Skills for Success model](#) over time. The nine identified skills are:

- Reading
- Document Use
- Writing
- Oral Communication
- Numeracy
- Thinking
- Digital Technology
- Working with Others
- Continuous Learning

## Level Structure

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### Level 1, 5 Weeks (150 hrs)

Code	Level 1 Unit Title	Hrs*	Pg	Practical Objectives*
ICA-100	Safety	18	13	1. Perform respirator fit and seal checks. 2. Perform respirator maintenance. 3. Use PPE.
ICA -105	Trade Math	15	15	1. Perform mathematical calculations.
ICA -110	Tools and Measuring Devices	11	16	1. Use basic measuring and monitoring devices and interpret results.
ICA -115	Access Equipment	18	18	1. Perform pre-operation inspection and operate access equipment.
ICA -120	Trade Documentation	6	19	N/A
ICA -125	Substrate Preparation I – Industrial Substrates	24	20	1. Clean substrate. 2. Remove basic coatings mechanically.
ICA -130	Coatings I	12	22	1. Mix coatings.
ICA -135	Coating Applications I – Brush and Roller	24	23	1. Apply coatings using brush and roller methods. 2. Perform striping.
ICA -140	Introduction to Quality Control	16	24	1. Perform a basic visual inspection of a coated substrate.
MENT-700	Mentoring I	6	26	N/A

### Level 2, 5 Weeks (150 hrs)

Code	Level 2 Unit Title	Hrs*	Pg	Practical Objectives*
ICA-200	Confined Space Awareness	6	29	1. Perform confined space rescue.
ICA -205	Rigging, Hoisting and Lifting	9	31	1. Tie basic knots. 2. Use slings and connection devices. 3. Perform standard hand signals.
ICA -210	Drawings and Specifications	18	33	1. Locate information on drawings and specifications.

Code	Level 2 Unit Title	Hrs*	Pg	Practical Objectives*
ICA -215	Measuring, Monitoring and Testing Equipment	6	34	1. Use measuring, monitoring and testing equipment and interpret results.
ICA -220	Industrial Power and Mechanical Tools	6	35	N/A
ICA-225	Substrate Preparation – Metal (Pre-Blasting)	18	36	1. Perform repairs and verify substrate conditions and profile
ICA -230	Substrate Preparation – Concrete (Pre-Blasting)	12	38	1. Perform repairs and verify substrate conditions and profile
ICA -235	Substrate Preparation – Synthetic	9	40	1. Identify and remove contaminants, coatings, and substrate defects. 2. Inspect and verify substrate profile requirements.
ICA -240	Substrate Preparation – Wood	6	42	1. Mechanically prepare wood substrates. 2. Repair substrate defects with wood fillers and sealers.
ICA -245	Coatings II	12	44	N/A
ICA -250	Coating Applications II – Multi-Coat Systems	24	46	1. Mix and apply multi-coat systems. 2. Verify adhesion. 3. Measure film thickness. 4. Monitor and record environmental conditions.
ICA -255	Spray Coating Applications I – Airless	12	48	1. Perform masking and substrate protection. 2. Perform airless spray application.
ICA -260	Spray Coating Applications II – Air-assisted Airless and HVLP	12	50	1. Perform masking and substrate protection. 2. Perform HVLP spray application.

**Level 3, 6 Weeks (180 hrs)**

Code	Level 3 Unit Title	Hrs*	Pg	Practical Objectives*
MENT-701	Mentoring II	6	53	N/A
ICA-300	Project Planning and Estimating	18	54	1. Prepare quantity take-offs and material estimates.
ICA-305	Spray Coating Applications III - Conventional Pressure Pot and Electrostatic Systems	12	56	1. Set up and operate a conventional pressure-pot spray system 2. Instructor demonstration or video: 3. Set up and operate an electrostatic spray system
ICA-310	Tools and Equipment - Abrasive Blasting Equipment	12	58	N/A
ICA -315	Substrate Preparation III – Abrasive Blasting and Advanced Substrate Preparation	30	60	1. Perform setup, inspection, operation and troubleshooting of abrasive blasting equipment.
ICA-320	Coating Applications III – Specialty Coatings	30	62	1. Instructor demonstration or video of specialty coating equipment and application.
ICA-325	HAZMAT Containment Systems	12	64	1. Perform HAZMAT containment setup and negative-air system.
ICA-330	Lead Abatement	12	65	1. Instructor demonstration or video of lead abatement procedures.
ICA-335	Mould Remediation	9	67	1. Instructor demonstration or video of mould remediation procedures.
ICA-340	Asbestos Abatement	9	69	1. Instructor demonstration or video of asbestos abatement procedures.
ICA-345	Program Review	30	71	N/A

**\*Hours:** The time it should take to cover the unit (a guide only).

**\*Practical Objectives:** The tasks/skills apprentices must be exposed to during technical training. An individual or group performance of the task/skill is recommended; if not possible, an instructor demonstration is acceptable. Training Providers should use practical, hands-on learning whenever possible, whether identified in the curriculum as a practical objective or not.

**Level 1**  
**5 Weeks (150 hours)**

## ICA-100 Safety

### Learning Outcomes:

- Demonstrate knowledge of safe work practices and procedures.
- Demonstrate knowledge of laws and regulatory requirements pertaining to workplace safety, PPE and safety equipment.
- Demonstrate knowledge of PPE and safety equipment, their applications, maintenance and procedures for use.
- Demonstrate knowledge of LOTO procedures.

### 2025 NSOS Sub-Tasks

- 1.01 Uses personal protective equipment (PPE) and safety equipment
- 1.02 Maintains safe work environment
- 1.03 Performs lock-out and tag-out procedures
- 1.04 Protects the environment
- 3.01 Uses documentation
- 3.04 Handles materials and supplies
- 4.01 Protects surroundings

### Suggested Hours:

6 Hours

### Theoretical Objectives:

1. Define terminology associated with safety equipment and practices.
2. Identify hazards and describe safe work practices and procedures.
  - i) fire safety
  - ii) flammable liquids
  - iii) confined spaces
  - iv) asbestos, lead and mould hazards
3. Identify PPE, their applications, limitations and procedures for use.
  - i) respirators
  - ii) steel-toed boots
  - iii) hardhats
  - iv) safety glasses
  - v) hearing protection
  - vi) gloves
  - vii) face shields
  - viii) fire-retardant clothing

- ix) high-visibility clothing
- 4. Describe procedures used to inspect, maintain and store PPE and safety equipment.
- 5. Identify safety equipment, their applications and procedures for use.
  - i) fall protection
- 6. Describe LOTO procedures.
- 7. Identify federal, provincial, municipal safety and health laws and regulatory requirements.
  - i) OHS
  - ii) WHMIS
  - iii) SDS
  - iv) Designated Substances
  - v) Environment Protection Act
  - vi) TDG
- 8. Identify regulations and safety documentation pertaining to the use of PPE and safety equipment.
- 9. Describe methods to ensure proper ventilation.
- 10. Describe environmental protection methods.
  - i) spill control
  - ii) waste handling
- 11. Describe the procedures used to inspect, organize and store materials and supplies on site.
- 12. Describe the procedures used to protect the work area.
- 13. Describe safe lifting and carrying techniques.
- 14. Describe the importance of performing housekeeping duties.
- 15. Identify developing technologies and practices pertaining to less toxic and environmentally conscious products.

### **Practical Objectives**

- Perform respirator fit and seal checks.
- Perform respirator maintenance.
- Use PPE.

## ICA-105 Trade Math

### Learning Outcomes:

- Demonstrate knowledge of math foundations used in measurements, conversions and calculations.

### 2025 NSOS Sub-Tasks

N/A

### Suggested Hours:

15 Hours

### Theoretical Objectives

1. Describe the procedures to perform basic mathematical calculations using whole numbers, fractions and decimals.
2. Describe the procedures to perform unit conversions
  - i) length
  - ii) area
  - iii) volume
  - iv) weight
3. Describe the procedures to calculate percentages and ratios used in coating, mixing and application.
4. Describe the procedures to calculate substrate areas, volumes and coating coverage requirements.
5. Describe the procedures to convert between imperial and metric.

### Practical Objectives

- Perform mathematical calculations.

## ICA-110 Tools and Measuring Devices

### Learning Outcomes

- Demonstrate knowledge of hand tools, their applications, maintenance and procedures for use.
- Demonstrate knowledge of power tools, their applications, maintenance and procedures for use.
- Demonstrate knowledge of basic measuring devices, their applications, maintenance and procedures for use.

### 2025 NSOS Sub-Tasks

2.01 Uses hand tools

2.02 Uses power tools

2.06 Uses measuring, monitoring and testing equipment

### Suggested Hours:

11 Hours

### Theoretical Objectives

1. Identify hazards and describe safe work practices and procedures.
2. Identify hand and power tools and describe their applications and procedures for use.
  - i) hand tools
    - brushes
    - rollers
    - scrapers
    - wire brushes
    - chipping hammers
  - ii) power tools
    - grinders
    - pneumatic needle scalers
    - sanders
    - mechanical mixers
3. Identify basic measuring devices and describe their applications and procedures for use.
4. Describe the procedures used to inspect, maintain and store tools and measuring devices.

## **Practical Objectives**

- Use basic measuring and monitoring devices and interpret results.

## ICA-115 Access Equipment

### Learning Outcomes:

- Demonstrate knowledge of access equipment, their applications, maintenance and procedures for use.

### 2025 NSOS Sub-Tasks

2.05 Uses access equipment

### Suggested Hours:

18 Hours

### Theoretical Objectives

1. Identify access equipment and describe their applications and procedures for use.
2. Describe the procedures used to set up, position and secure access equipment.
3. Describe the procedures used to inspect, maintain and store access equipment.
4. Describe fall prevention and fall protection practices.

### Practical Objectives

- Perform pre-operation inspection and operate access equipment.

## ICA-120 Trade Documentation

### Learning Outcomes:

- Demonstrate knowledge of technical documents and documentation, their characteristics and applications.
- Demonstrate knowledge of procedures used to organize and maintain materials.

### 2025 NSOS Sub-Tasks

3.01 Uses documentation

### Suggested Hours:

6 Hours

### Theoretical Objectives

1. Identify trade-related documentation and describe their applications and procedures for use.

### Practical Objectives

N/A

## ICA-125 Substrate Preparation I – Industrial Substrates

### Learning Outcomes:

- Demonstrate knowledge of substrate preparation methods.
- Demonstrate knowledge of basic fillers, sealers and caulking materials, their characteristics, applications and procedures for use.
- Demonstrate knowledge of masking procedures.
- Demonstrate knowledge of waste handling and storing procedures.

### 2025 NSOS Sub-Tasks

- 4.01 Protects surroundings
- 4.02 Masks objects, equipment and substrates
- 6.01 Performs initial assessment
- 6.02 Cleans substrate
- 6.03 Applies caulking
- 6.04 Abrades substrates
- 6.05 Protects surrounding areas
- 6.06 Removes coatings and contaminants

### Suggested Hours:

24 Hours

### Theoretical Objectives

1. Define terminology associated with substrate preparation.
  - i) SSPC
  - ii) NACE
  - iii) AMPP
2. Identify hazards and describe safe work practices pertaining to substrate preparation.
3. Identify industrial substrates and describe their characteristics and applications.
4. Identify common substrate defects and contamination issues.
  - i) rust
  - ii) moisture
  - iii) dirt
  - iv) grease
  - v) chlorides
  - vi) organic matter

5. Describe basic substrate cleaning and abrasion methods.
6. Describe how substrate cleanliness, substrate profile and substrate energy influence coating adhesion.
7. Describe the procedures used to remove existing basic coatings using hand and light mechanical methods.
8. Identify basic fillers, sealers and caulking materials and describe their characteristics and applications.
9. Describe the procedures used to apply fillers, sealers and caulking.
10. Describe the procedures used to protect surroundings, including masking adjacent areas and equipment.
11. Describe the procedures used to handle and dispose of substrate preparation waste.

#### **Practical Objectives**

- Clean substrate.
- Remove basic coatings mechanically.

## ICA-130 Coatings I

### Learning Outcomes:

- Demonstrate knowledge of coatings, their characteristics and applications.
- Demonstrate knowledge of procedures to prepare coatings.
- Demonstrate knowledge of coatings storage and disposal procedures.

### 2025 NSOS Sub-Tasks

13.02 Prepares coatings.

### Suggested Hours:

12 Hours

### Theoretical Objectives

1. Define terminology associated with industrial coatings.
2. Identify basic industrial coatings and describe their properties and composition.
3. Identify safety hazards associated with coating materials.
4. Describe the curing mechanisms of common coatings.
5. Identify components of coatings.
  - i) binders
  - ii) pigments
  - iii) solvents
  - iv) additives
6. Describe factors to consider when selecting coatings materials.
  - i) substrate conditions
  - ii) environmental conditions
7. Describe how environmental conditions affect coating performance.
8. Describe the procedures used to prepare and mix coatings.
9. Describe the procedures used to store, handle and dispose of industrial coatings.

### Practical Objectives

- Mix coatings.

## ICA-135 Coating Applications I – Brush and Roller

### Learning Outcomes

- Demonstrate knowledge of brushes and rollers, their characteristics and applications.
- Demonstrate knowledge of procedures and techniques used to apply coatings using brushes and rollers.
- Demonstrate knowledge of procedures to inspect, maintain and store brushes and rollers.

### 2025 NSOS Sub-Tasks

4.04 Performs quality control

13.01 Primes substrates

13.03 Applies coatings with hand tools

### Suggested Hours:

24 Hours

### Theoretical Objectives

1. Identify brushes and rollers and describe their characteristics and applications.
2. Describe brush and roller application techniques.
3. Describe the procedures used to apply primer and intermediate coatings.
4. Describe the procedures used to maintain a wet edge, avoid lap marks and control coating thickness.
5. Identify common application-related coating defects and describe their causes and prevention.
6. Describe the procedures used to conduct basic visual checks for coverage and uniformity.
7. Describe the procedures used to inspect, maintain and store brushes and rollers.

### Practical Objectives

- Apply coatings using brush and roller methods.
- Perform striping.

## ICA -140 Introduction to Quality Control

### Learning Outcomes

- Demonstrate knowledge of procedures to assess substrate conditions and deficiencies.
- Demonstrate knowledge of procedures to assess products and coatings conditions and deficiencies.
- Demonstrate knowledge of procedures to assess quality of coated substrates.

### 2025 NSOS Sub-Tasks

4.04 Performs quality control assessments

### Suggested Hours:

16 Hours

### Theoretical Objectives

1. Define terminology associated with quality control
  - i) adhesion
  - ii) profile
  - iii) film thickness
  - iv) recoat window
2. Identify common substrate defects that affect coating performance.
3. Explain how substrate conditions influence coating adhesion and performance.
4. Explain how viscosity, solvent evaporation and curing affect coating performance.
5. Explain the relationship between wet film thickness and dry film thickness and why proper film thickness is essential for coating performance.
6. Explain how environmental conditions affect coating application and dry time.
  - i) temperature
  - ii) humidity
  - iii) air movement
7. Identify common coating defects and explain their causes and prevention.
  - i) holidays
  - ii) runs
  - iii) pinholes
8. Describe the procedures used to visually assess the quality of coated substrates.

## **Practical Objectives**

- Perform a basic visual inspection of a coated substrate.

## MENT-700 Workplace Mentoring I

### Learning Outcomes:

- Demonstrate knowledge of effective communication practices as a learner.
- Demonstrate knowledge of strategies to assist in learning skills in the workplace.

### 2025 NSOS Sub-Tasks

5.01 Uses communication techniques.

5.02 Uses mentoring techniques.

### Suggested Hours:

6 Hours

### Theoretical Objectives:

1. Describe the importance of one's own individual experiences.
2. Identify behaviours that demonstrate positive learning experiences.
3. Identify the benefits of workplace mentoring for the apprentice, mentor, and employer.
4. Identify the partners involved in apprenticeship training.
5. Describe the shared responsibilities for workplace learning in apprenticeship.
6. Identify different learning needs and strategies to address challenges or barriers in the workplace.
  - i) learning disabilities
  - ii) language
  - iii) underrepresentation
7. Identify the components that create a positive and inclusive workplace culture.
  - i) workplace characteristics
  - ii) individual behaviours
8. Identify various learning styles and determine one's own learning preferences.
9. Explain how learning preferences impact learning new skills.
10. Identify different learning strategies to meet individual learning needs.
11. Describe the importance of adapting to a variety of teaching and learning methods in the workplace.

12. Identify techniques for effective communication as a learner.

- i) verbal and non-verbal
- ii) active listening

13. Identify and describe personal responsibilities and attitudes that contribute to on-the-job success.

- i) self advocating
- ii) asking questions
- iii) accepting constructive feedback
- iv) working safely
- v) employing time management techniques and being punctual

**Practical Objectives:**

N/A

**Level 2**  
**5 Weeks (150 hours)**

## ICA-200    Confined Space Awareness

### Learning Outcomes:

- Demonstrate knowledge of procedures to work in confined spaces.
- Demonstrate knowledge of confined space communication methods.
- Demonstrate knowledge of confined space hazards.

### 2025 NSOS Sub-Tasks

1.02 Maintains safe work environment

### Suggested Hours:

6 Hours

### Theoretical Objectives

1. Identify hazards of working in confined spaces.
  - i) oxygen deficiency
  - ii) air contaminants
  - iii) fire and explosion
  - iv) electrical
  - v) restricted visibility
  - vi) coating-related hazards
2. Identify regulatory requirements related to confined spaces.
  - i) employee requirements
  - ii) employer requirements
3. Identify basic ventilation equipment used in coating environments.
4. Describe communication practices during confined space work.
  - i) entrant and attendant responsibilities
  - ii) continuous monitoring
  - iii) contingency planning
5. Identify confined space documentation requirements.
  - i) field-level risk assessment (FLRA)
  - ii) job safety analysis (JSA)
  - iii) forms
  - iv) permits
6. Identify and describe isolation controls.

7. Describe safe access and egress requirements.

- i) equipment
- ii) mechanical retrieval equipment
- iii) clear pathways
- iv) entry procedures
- v) rescue plan

**Practical Objectives**

- Perform confined space rescue.

## ICA-205 Rigging, Hoisting and Lifting Equipment

### Learning Outcomes:

- Demonstrate knowledge of rigging, hoisting and lifting equipment and accessories, their applications, limitations and procedures for use.
- Demonstrate knowledge of knots, bends and hitches, their applications and procedures for use.

### 2025 NSOS Sub-Tasks

2.04 Uses rigging, hoisting and lifting equipment

### Suggested Hours:

9 Hours

### Theoretical Objectives

1. Define terminology associated with rigging, hoisting and lifting equipment.
2. Identify rigging, hoisting and lifting equipment and accessories, and describe their applications, limitations and procedures for use.
3. Identify hazards, regulatory requirements and safe work practices associated with rigging, hoisting and lifting equipment.
4. Identify knots, bends and hitches, and describe their applications and procedures for use.
5. Describe the procedures used to rig material and equipment for lifting.
6. Describe the procedures used to perform basic lifting operations.
7. Describe the procedures used to inspect, maintain and store equipment.
8. Describe communication practices during lifting operations.
  - i) audio
  - ii) visual
  - iii) hand signals

### Practical Objectives

- Perform standard hand signals.
- Tie basic knots.

- Use slings and connection devices.

## ICA-210 Drawings and Specifications

### Learning Outcomes:

- Demonstrate knowledge of the procedures to read and interpret drawings and specifications.

### 2025 NSOS Sub-Tasks

3.03 Interprets drawings and specifications

### Suggested Hours:

18 Hours

### Theoretical Objectives

1. Describe the procedures used to perform metric and imperial conversions.
2. Identify drawings and specifications used in industrial projects.
3. Identify common abbreviations and symbols found on architectural drawings.
4. Identify basic drawing projections and views relevant to coating work.
5. Describe information found on architectural drawings.
6. Describe the procedures used to cross-reference project specifications with product and material data sheets.
7. Describe how drawing information is used to plan substrate preparation and coating application.

### Practical Objectives

- Locate information on drawings and specifications.

## ICA-215 Measuring, Monitoring and Testing Equipment

### Learning Outcomes:

- Demonstrate knowledge of measuring, monitoring and testing equipment, their applications and procedures for use.

### 2025 NSOS Sub-Tasks

2.06 Uses measuring, monitoring and testing equipment

### Suggested Hours:

6 Hours

### Theoretical Objectives

1. Identify measuring, monitoring and testing equipment, and describe their applications and procedures for use.
2. Describe the procedures used to inspect, store and maintain measuring, monitoring and testing equipment.
3. Describe the procedures used to calibrate measuring, monitoring and testing equipment.

### Practical Objectives

- Use measuring, monitoring and testing equipment and interpret results.

## ICA-220 Industrial Power and Mechanical Tools

### Learning Outcomes

- Demonstrate knowledge of industrial power tools and attachments, their applications, limitations and procedures for use.
- Demonstrate knowledge of mechanical equipment, their applications, limitations and procedures for use.
- Demonstrate knowledge of inspection, maintenance and storage procedures for power tools and mechanical equipment.

### 2025 NSOS Sub-Tasks

2.02 Uses power tools

2.03 Uses mechanical equipment

### Suggested Hours:

6 Hours

### Theoretical Objectives

1. Identify industrial power tools and attachments and describe their applications and procedures for use.
2. Identify mechanical equipment and describe their applications and procedures for use.
3. Describe hazards and safe work practices pertaining to industrial power and mechanical tools.
4. Describe the procedures used to inspect, maintain and store power tools and mechanical equipment.

### Practical Objectives

N/A

## ICA-225 Substrate Preparation – Metal (Pre-Blasting)

### Learning Outcomes

- Demonstrate knowledge of metal substrate preparation (pre-blasting).
- Demonstrate knowledge of mechanical methods used to prepare metal substrates.

### 2025 NSOS Sub-Tasks

7.01 Mechanically prepares metal substrates

### Suggested Hours:

18 Hours

### Theoretical Objectives

1. Define terminology associated with metal substrate preparation (pre-blasting).
2. Identify hazards associated with metal substrate preparation (pre-blasting).
3. Identify tools and equipment used to prepare metal substrates and describe their selection and use.
4. Describe environmental condition requirements, and methods used to determine, verify, and monitor conditions during substrate preparation.
5. Describe substrate conditions and defects and explain methods used to identify and assess them.
6. Describe contaminants commonly found on metal substrates and procedures used to remove them.
7. Describe the procedures used to prepare metal substrate (pre-blasting).
8. Describe the procedures used to assess substrate visually.
9. Identify substrate contaminants and imperfections.
  - i) organic
  - ii) inorganic
  - iii) chemical
  - iv) mill scale
  - v) loose rust
  - vi) loose paint

- vii) pitting
- viii) burrs
- ix) laminations
- x) weld splatter

10. Describe the procedures used to clean substrate.

- i) contaminate-free water rinsing
- ii) wiping substrates
- iii) degreasers
- iv) pressure washing
- v) steam cleaning

11. Describe the procedures used to verify cleanliness.

- i) perform chloride tests
- ii) uniform appearance
- iii) dust tests
- iv) visual contamination inspections

12. Describe the procedures used to repair metal substrates.

### **Practical Objectives**

- Perform repairs and verify substrate conditions and profile.

## ICA-230 Substrate Preparation - Concrete (Pre-Blasting)

### Learning Outcomes

- Demonstrate knowledge of concrete substrate preparation (pre-blasting).
- Demonstrate knowledge of methods used to prepare concrete substrates.

### 2025 NSOS Sub-Tasks

8.01 Mechanically prepares concrete substrates

8.02 Repairs concrete substrates

### Suggested Hours:

12 Hours

### Theoretical Objectives

1. Define terminology associated with concrete substrate preparation (pre-blasting).
2. Identify hazards associated with concrete substrate preparation (pre-blasting).
3. Identify tools and equipment used to prepare concrete substrates.
4. Describe environmental condition requirements and methods used to determine, verify, and monitor environmental conditions.
5. Describe the procedures used to prepare concrete substrates and methods used to achieve and maintain the required profile.
6. Describe procedures used to test concrete substrates for hardness, moisture, contaminants and profile depth.
7. Describe the procedures used to assess substrate visually.
8. Identify substrate contaminants and imperfections.
  - i) organic
  - ii) inorganic
  - iii) chemical
  - iv) laitance
  - v) efflorescence
9. Describe the procedures used to clean substrate.
  - i) contaminate-free water rinsing

- ii) wiping substrates
- iii) degreasers
- iv) pressure washing
- v) steam cleaning

10. Describe the procedures used to verify cleanliness.

- i) perform chloride tests
- ii) uniform appearance
- iii) dust tests
- iv) visual contamination inspections

11. Describe the procedures used to repair concrete substrate imperfections.

- i) concrete crack fillers
- ii) sealants
- iii) patching compounds
- iv) epoxy injection
- v) polyurethane injection
- vi) gaps

12. Identify concrete substrate repair materials.

- i) grouting compounds
- ii) epoxies
- iii) caulking
- iv) backing rods

### **Practical Objectives**

- Perform repairs and verify substrate conditions and profile.

## ICA-235 Substrate Preparation – Synthetic

### Learning Outcomes

- Demonstrate knowledge of synthetic substrate preparation.
- Demonstrate knowledge of methods used to prepare synthetic substrates to achieve coating-ready surfaces.

### 2025 NSOS Sub-Tasks

9.01 Mechanically prepares synthetic substrates

9.02 Chemically treats synthetic substrates

9.03 Repairs synthetic substrates

### Suggested Hours:

9 Hours

### Theoretical Objectives

1. Define terminology associated with synthetic substrate preparation.
2. Identify hazards and safe work practices associated with synthetic substrate preparation.
3. Identify tools and equipment used to prepare synthetic substrates.
4. Describe environmental condition requirements and methods used to determine, verify and monitor environmental conditions.
5. Describe the procedures used to prepare synthetic substrates.
6. Describe contaminants commonly found on synthetic substrates and procedures used to remove them.
7. Describe methods used to remove existing coatings and explain how substrate profile requirements are verified.
8. Describe the procedures used to assess substrates visually.
9. Describe the procedures for static control and grounding.
10. Identify substrate contaminants and imperfections.
  - i) organic
  - ii) inorganic

- iii) chemical
- iv) oxidation
- v) lamination
- vi) UV degradation

11. Describe the procedures used to clean substrate.

- i) contaminate-free water rinsing
- ii) wiping substrates
- iii) degreasers
- iv) pressure washing
- v) steam cleaning
- vi) two-cloth cleaning method

12. Describe the procedures used to verify cleanliness.

- i) perform chloride tests
- ii) uniform appearance
- iii) dust tests
- iv) visual contamination inspections
- v) water break tests

### **Practical Objectives**

- Identify and remove contaminants, coatings and substrate defects.
- Inspect and verify substrate profile requirements.

## ICA-240 Substrate Preparation – Wood

### Learning Outcomes

- Demonstrate knowledge of wood substrate preparation.
- Demonstrate knowledge of procedures prepare wood substrates.
- Demonstrate knowledge of basic repair materials and their applications.
- Demonstrate knowledge of quality checks applied to wood substrates.

### 2025 NSOS Sub-Tasks

- 4.04 Performs quality control assessments
- 10.01 Mechanically prepares wood substrates
- 10.02 Chemically treats synthetic substrates
- 10.03 Repairs synthetic substrates

### Suggested Hours:

6 Hours

### Theoretical Objectives

1. Define terminology associated with wood substrate preparation.
2. Identify hazards and describe safe work practices pertaining to wood preparation.
3. Identify wood substrates and describe their characteristics and applications.
  - i) solid wood
  - ii) engineered wood
  - iii) composite wood
4. Identify common substrate defects and contamination issues.
  - i) raised grain
  - ii) residual coatings
  - iii) oil, resin, mill glaze
  - iv) moisture-related swelling
  - v) surface contamination
5. Describe sanding and mechanical conditioning methods for wood substrates.
  - i) grain
  - ii) hardness
  - iii) cutting ability
  - iv) heat development

6. Describe procedures used to chemically treat wood substrates.
7. Describe procedures used to perform basic wood repairs and filler application.
8. Describe procedures used to verify texture and substrate readiness for coating.
9. Describe procedures used to conduct quality checks.
  - i) cleanliness verification
  - ii) inspection for uniform profile
  - iii) absence of contamination
  - iv) proper conditioning

### **Practical Objectives**

- Mechanically prepare wood substrates.
- Repair substrate defects with wood fillers and sealers.

## ICA-245 Coatings II

### Learning Outcomes

- Demonstrate knowledge of industrial coatings, their properties, composition and performance characteristics.
- Demonstrate knowledge of safety considerations associated with coating systems.

### 2025 NSOS Sub-Tasks

13.02 Prepares coatings

### Suggested Hours:

12 Hours

### Theoretical Objectives

1. Identify coatings and describe their properties and composition.
2. Identify hazards and describe safe work practices pertaining to coating materials.
3. Describe curing mechanisms used in industrial coating systems.
  - i) chemical
  - ii) thermal
4. Identify the components of coatings and explain their function.
  - i) pigments
  - ii) additives
  - iii) binders
  - iv) solvents
5. Describe factors to consider when selecting coating materials.
  - i) substrate type
  - ii) environmental
  - iii) chemical exposure
  - iv) regulatory requirements
  - v) expected service life
6. Describe the procedures used to prepare coatings.
7. Describe the procedures used to store, handle, and dispose of industrial coatings.

## **Practical Objectives**

N/A

## ICA-250 Coating Applications II – Multi-Coat Systems

### Learning Outcomes

- Demonstrate knowledge of multi-coat coating systems, their sequence and application requirements.
- Demonstrate knowledge of brush and roller application techniques used for primers, intermediate coats and finish coats.
- Demonstrate knowledge of environmental monitoring practices essential for multi-coat performance.
- Demonstrate knowledge of inspection and measurement techniques for wet and dry film thickness.

### 2025 NSOS Sub-Tasks

2.06 Uses measuring, monitoring and testing equipment

4.06 Performs quality control assessments

13.01 Primes substrates

13.03 Applies coatings with hand tools

### Suggested Hours:

24 Hours

### Theoretical Objectives

1. Identify hazards and describe safe work practices pertaining to multi-coat systems.
2. Identify types and purposes of multi-coat systems.
  - i) primer
  - ii) intermediate
  - iii) topcoat layers
3. Describe surface preparation and pre-application requirements.
4. Describe environmental condition requirements for coating application.
  - i) temperature
  - ii) humidity
  - iii) dew point
  - iv) airflow
5. Describe procedures used to mix and prepare coatings for multi-coat systems.
6. Describe procedures used to apply multi-coat systems using brush and roller.

7. Describe the procedures used to conduct quality checks.
  - i) wet and dry film thickness
  - ii) visual measurements
  
8. Describe procedures used to identify and troubleshoot application coating defects.
  - i) runs
  - ii) sags
  - iii) lap marks
  - iv) pinholes
  - v) insufficient film build
  
9. Describe recording and documentation procedures.

**Practical Objectives**

- Mix and apply multi-coat systems.
- Verify adhesion.
- Measure film thickness.
- Monitor and record environmental conditions.

## ICA-255 Spray Coating Applications I – Airless

### Learning Outcomes

- Demonstrate knowledge of airless spray pumps and applicators, their applications, limitations and procedures for use.
- Demonstrate knowledge of hazards and safe work practices associated with airless spray pumps.
- Demonstrate knowledge of airless spraying quality-control procedures.

### 2025 NSOS Sub-Tasks

- 1.01 Uses personal protective equipment (PPE) and safety equipment
- 1.02 Maintains safe work environment
- 4.01 Protect surroundings
- 4.02 Masks objectives, equipment and substrates
- 4.04 Performs quality control assessments
- 13.04 Applies coatings with spray equipment

### Suggested Hours:

12 Hours

### Theoretical Objectives

1. Identify hazards and describe safe work practices pertaining to airless spray operations.
2. Identify airless spray pumps and applicators and describe their applications, limitations and procedures for use.
3. Describe the procedures used to set up and operate airless spray equipment.
  - i) pump selection
  - ii) hose configuration
  - iii) tip installation
  - iv) pressure adjustment
  - v) priming
4. Describe grounding requirements and high-pressure safety precautions related to airless spray systems.
5. Describe overspray control practices and containment strategies.
6. Describe masking and protection procedures for industrial environments.

7. Describe spray techniques for achieving uniform film build, correct overlap and proper spray distance.
8. Describe the procedures used to apply coatings with airless spray equipment for primers, intermediates and finish coats.
9. Describe the procedures used to conduct quality checks.
  - i) pattern optimization
  - ii) film thickness verification

### **Practical Objectives**

- Perform masking and substrate protection.
- Perform airless spray application.

## ICA-260 Spray Coating Applications II – Air-assisted Airless and HVLP

### Learning Outcomes:

- Demonstrate knowledge of air-assisted airless and HVLP spray equipment, their applications, limitations and procedures for use.
- Demonstrate knowledge of procedures used to set up and operate air-assisted airless and HVLP systems.
- Demonstrate knowledge of hazards and safe work practices related to spray applications.
- Demonstrate knowledge of overspray control and quality verification procedures.

### 2025 NSOS Sub-Tasks

- 1.03 Uses personal protective equipment (PPE) and safety equipment
- 1.04 Maintains safe work environment
- 4.01 Protect surroundings
- 4.02 Masks objectives, equipment and substrates
- 4.04 Performs quality control assessments
- 13.04 Applies coatings with spray equipment

### Suggested Hours:

12 Hours

### Theoretical Objectives

1. Identify air-assisted airless and HVLP spray equipment and describe their applications and procedures for use.
2. Describe the procedures used to set up and operate air-assisted airless spray systems.
3. Describe the procedures used to set up and operate HVLP spray systems.
4. Describe grounding and electrical safety requirements related to spray applications.
5. Describe overspray control and containment practices suitable for low pressure assisted air systems.
6. Describe masking and protection procedures for industrial environments.
7. Describe spray techniques for fine finishing, touch up work and controlled film builds.

8. Describe the procedures used to apply coatings using air-assisted airless and HVLP spray equipment.
9. Describe the procedures to conduct quality checks.
  - i) pattern uniformity
  - ii) film build verification
  - iii) overspray control

**Practical Objectives**

- Perform masking and substrate protection.
- Perform HVLP spray application.

**Level 3**  
**6 weeks (180 hours)**

## MENT-701 Mentoring II

### Learning Outcomes:

- Demonstrate knowledge of effective communication practices as a mentor.
- Demonstrate knowledge of strategies for teaching workplace skills.

### Nova Scotia Occupational Standard Reference (Class A)

4.02 Uses mentoring techniques

### Suggested Hours:

6 Hours

### Theoretical Objectives:

1. Identify the different roles played by a workplace mentor.
2. Identify strategies to create a supportive learning environment.
3. Identify techniques for effective communication as a mentor.
  - i) constructive feedback
  - ii) active listening
  - iii) leading meetings and one-on-one sessions
4. Describe the steps in teaching a skill.
  - i) identifying the point of lesson
  - ii) linking the lesson
  - iii) demonstrating the skill
  - iv) providing practice
  - v) giving feedback
  - vi) assessing skill and progress
5. Identify strategies to assist in teaching a skill while meeting individual learning needs.
  - i) principles of instruction
  - ii) coaching skills
6. Explain how to adjust a lesson for various situations.

### Practical Objectives

N/A

## ICA-300 Project Planning and Estimating

### Learning Outcomes:

- Demonstrate knowledge of project planning and estimating.
- Demonstrate knowledge of procedures used to gather and interpret project information.
- Demonstrate knowledge of estimating procedures.
- Demonstrate knowledge of communication and documentation practices.

### 2025 NSOS Sub-Tasks

- 3.01 Uses documentation
- 3.02 Plans projects
- 3.03 Interprets drawings and specifications
- 3.04 Handles materials and supplies
- 5.01 Uses communication techniques

### Suggested Hours:

18 Hours

### Theoretical Objectives

1. Define terminology associated with project planning and estimating.
2. Identify sources of information relevant to project planning and estimating.
  - i) trade-related documentation
  - ii) related professionals
  - iii) clients and site representatives
  - iv) co-workers
3. Identify regulatory and project requirements.
  - i) standards and regulations
  - ii) environmental and safety codes
  - iii) permit requirements
  - iv) inspection
  - v) documentation requirements
4. Describe the procedures used to determine project scope and substrate requirements.
5. Describe the procedures used to estimate work requirements.
  - i) material quantities
  - ii) labour requirements
  - iii) equipment requirements

6. Describe the procedures used to prepare a preliminary project plan.
7. Describe trade specific software programs to produce project plans and estimates.

**Practical Objectives**

- Prepare quantity take-offs and material estimates.

# ICA-350 Spray Coating Applications III – Conventional Pressure Pot and Electrostatic Systems

## Learning Outcomes

- Demonstrate knowledge of conventional pressure pot and electrostatic spray systems, their applications, limitations and procedures for use.
- Demonstrate knowledge of methods used to optimize spray performance.
- Demonstrate knowledge of procedures used to verify coating quality.

## 2025 NSOS Sub-Tasks

4.01 Protect surroundings

4.02 Masks objectives, equipment and substrates

4.04 Performs quality control assessments

13.04 Applies coatings with spray equipment

## Suggested Hours:

12 Hours

## Theoretical Objectives

1. Identify hazards and describe safe work practices and procedures.
2. Identify hand and power tools and describe their applications and procedures for use.
  - i) hand tools
    - brushes
    - roller frames and covers
    - putty/joint/spackling knives
    - paint scrapers
    - multi-tools
    - wire brushes
    - sandpaper and sanding blocks
    - caulking gun
    - hand masker & painter's tape
    - scrapers / chisels
  - ii) power tools
    - electric sanders (orbitals, palm sanders)
    - paint sprayers (airless, hvlp, electrostatic)
    - heat guns
    - pressure washers
    - pneumatic or electric grinders

- needle scalers (pneumatic)
  - power mixers / mechanical mixers
3. Identify conventional compressed air spray systems and electrostatic spray systems and describe their applications, limitations and procedures for use.
  4. Describe the procedures used to set up and operate conventional pressure pot systems.
    - i) fluid pressure
    - ii) air pressure balancing
  5. Describe the procedures used to set up and operate electrostatic spray applicators.
    - i) charge control
    - ii) grounding requirements
    - iii) safety requirements
  6. Describe techniques to manage overspray, wrap and transfer efficiency when using conventional and electrostatic spray systems.
  7. Describe the procedures used to select and adjust applicators for conventional spray guns.
    - i) fluid nozzles
    - ii) air caps
    - iii) charge control
    - iv) atomizing air pressure
    - v) fan patterns
  8. Describe masking and protection procedures for industrial environments.
  9. Describe spray techniques used for continuous feed systems, complex geometry and high efficiency applications.
  10. Describe the procedures used to apply coatings with conventional pressure pot and electrostatic systems.
  11. Describe the procedures used to conduct quality checks and verification of environmental conditions.

### **Practical Objectives**

- Set up and operate a conventional pressure-pot spray system.
- Instructor demonstration or video of setting up and operating an electrostatic spray system.

## ICA-310 Tools and Equipment - Abrasive Blasting Equipment

### Learning Outcomes

- Demonstrate knowledge of abrasive blasting equipment, accessories, applicators and components, their characteristics, applications and operating procedures.
- Demonstrate knowledge of hazards and safe work practices associated with abrasive blasting.
- Demonstrate knowledge of procedures to set up, operate, inspect, maintain, and store abrasive blasting equipment.

### 2025 NSOS Sub-Tasks

- 1.01 Uses personal protective equipment (PPE) and safety equipment
- 1.02 Maintains safe work environment
- 2.03 Uses mechanical equipment

### Suggested Hours:

12 Hours

### Theoretical Objectives

1. Identify hazards and safe work practices associated with abrasive blasting tools and equipment.
  - i) breathing air systems
2. Identify abrasive blasting equipment and accessories and describe their applications and procedures for use.
  - i) blasting machines
    - wet
    - Slurry
    - vapor
  - ii) blast cabinets
  - iii) portable blast packages
  - iv) centrifugal wheel blast equipment
3. Identify blasting applicators and components and describe their purpose and operation.
4. Describe the procedures used to set up abrasive blasting equipment.
  - i) compressor selection
  - ii) air-volume and pressure requirements
  - iii) media metering

- iv) nozzle selection
- v) standoff distance
- vi) angle of application
- vii) use of test panels
- viii) production checks

5. Describe containment, ventilation and dust-control strategies used in abrasive blasting environments.
6. Describe the procedures used to inspect, maintain and store abrasive blasting equipment.
7. Describe documentation requirements associated with abrasive blasting.

**Practical Objectives**

N/A

# ICA-315 Substrate Preparation III – Abrasive Blasting and Advanced Substrate Preparation

## Learning Outcomes

- Demonstrate knowledge of hazards and safe work practices associated with blasting.
- Demonstrate knowledge of blasting and advanced preparation methods.
- Demonstrate knowledge of inspection and quality-verification procedures for prepared substrates.

## 2025 NSOS Sub-Tasks

6.05 Protects surrounding areas.

6.06 Removes coatings and contaminants

7.01 Mechanically prepares metal substrates.

7.02 Chemically treats metal substrates.

8.01 Mechanically prepares concrete substrates.

9.01 Mechanically prepares synthetic substrates.

9.02 Chemically treats synthetic substrates.

## Suggested Hours:

30 Hours

## Theoretical Objectives

1. Define terminology associated with abrasive blasting and advanced substrate preparation.
2. Identify hazards and describe safe work practices and procedures.
  - i) abrasive blasting
  - ii) noise exposure
  - iii) ricocheting
  - iv) dust and contaminants
  - v) static buildup
  - vi) blasting
  - vii) water cleaning
  - viii) mechanical cleaning
  - ix) chemical cleaning
3. Describe environmental and safety controls used during blasting and advanced substrate preparation procedures.
  - i) abrasive blasting
  - ii) ventilation equipment

- iii) containment systems
  - iv) blast suits
  - v) gloves
  - vi) hoods
  - vii) breathing-air systems
  - viii) hearing protection
4. Identify blasting and advanced preparation methods and describe their applications, limitations and procedures for use.
- i) pressure blasters
  - ii) vacuum blasters
  - iii) wheel blasting
  - iv) shot blasting
  - v) siphon (suction) blasters
  - vi) wet/slurry blasting machines
  - vii) portable blast packages
  - viii) blast cabinets
5. Describe the procedures used for dry abrasive blasting.
- i) operation of blast pots
  - ii) air/abrasive hoses
  - iii) metering valves
  - iv) Venturi-type nozzles
  - v) Straight bore nozzles
6. Describe the procedures used for high-pressure water cleaning.
7. Describe the procedures used for chemical cleaning.
8. Describe the procedures used to acid-etch concrete.
9. Describe inspection and quality-verification procedures for prepared substrates.

### **Practical Objectives**

- Perform setup, inspection, operation and troubleshooting of abrasive blasting equipment.

## ICA-320 Coating Applications III – Specialty Coatings

### Learning Outcomes

- Demonstrate knowledge of specialty coating systems, their applications, limitations and procedures for use.

### 2025 NSOS Sub-Tasks

- 14.01 Applies thermal sprays
- 14.02 Installs lining systems
- 14.03 Applies powder coatings
- 14.04 Applies liquid coatings with plural components
- 14.06 Installs fibre-reinforced plastics
- 14.07 Installs seamless flooring systems
- 14.08 Installs intumescent fireproofing
- 14.09 Installs cementitious fireproofing
- 14.10 Applies solid epoxy bonding compounds

### Suggested Hours:

30 Hours

### Theoretical Objectives

1. Define terminology associated with specialty coating systems.
2. Identify hazards and describe safe work practices related to specialty coating systems.
3. Identify specialty coating systems and describe their characteristics, applications and procedures for use.
  - i) thermal sprays
  - ii) lining systems
  - iii) powder coatings
  - iv) liquid plural component coatings
  - v) fibre reinforced plastics
  - vi) seamless flooring systems
  - vii) intumescent and cementitious fireproofing
  - viii) solid epoxy bonding compounds
  - ix) component coatings
  - x) fibre reinforced plastics-reinforced plastics
  - xi) seamless flooring systems

4. Describe the procedures used to prepare, apply and finish specialty coatings.
5. Describe environmental, equipment and material factors that influence specialty coating performance.
6. Describe inspection and quality verification requirements for specialty coating and lining systems.

**Practical Objectives**

- Instructor demonstration or video of specialty coating equipment and application.

## ICA-325 HAZMAT Containment Systems

### Learning Outcomes

- Demonstrate knowledge of HAZMAT containment systems, their applications and procedures for use.

### 2025 NSOS Sub-Tasks

- 11.02 Prepares site

### Suggested Hours:

15 Hours

### Theoretical Objectives

1. Identify HAZMAT containment systems and describe their purpose, components and applications.
  - i) sealed enclosures
  - ii) barriers
  - iii) decontamination zones
  - iv) shrink-wrap systems
2. Describe procedures used to prepare the work site.
  - i) pre-cleaning
  - ii) access planning
  - iii) signage
  - iv) barricades
  - v) display requirements
3. Identify negative-pressure systems, mechanical ventilation and air filtration equipment used in HAZMAT control.
4. Identify atmospheric testing and monitoring equipment and describe their applications and procedures for use.
5. Describe procedures used to monitor, document and respond to hazardous atmospheric conditions.

### Practical Objectives

- Perform HAZMAT containment setup and negative-air system.

## ICA-330    Lead Abatement

### Learning Outcomes

- Demonstrate knowledge of hazards and safe work practices pertaining to lead abatement.
- Demonstrate knowledge of lead abatement procedures, their applications and procedures for use.

### 2025 NSOS Sub-Tasks

- 1.01 Uses personal protective equipment (PPE) and safety equipment
- 1.02 Maintains safe work environment
- 12.01 Performs lead abatement

### Suggested Hours:

12 Hours

### Theoretical Objectives

1. Identify hazards and describe safe work practices for lead abatement.
  - i) PPE
  - ii) exposure risks
  - iii) respiratory hazards
  - iv) worker decontamination requirements
2. Explain types and sources of lead in industrial environments.
  - i) lead based coatings
  - ii) contaminated substrates
3. Describe lead abatement methods.
  - i) chemical removal
  - ii) power tool removal
  - iii) abrasive blasting
4. Describe the procedure used to verify the scope of lead abatement.
  - i) worksite assessment
  - ii) material testing
5. Identify equipment used for lead abatement and describe their applications and procedures for use.
  - i) HEPA vacuums
  - ii) scrapers
  - iii) power tools

6. Describe the principles of lead removal and containment.
  - i) engineering controls
  - ii) negative-pressure enclosures
7. Describe the procedures used to handle and dispose of lead waste.
8. Describe methods used to verify completion of lead abatement.
  - i) visual inspection
  - ii) air monitoring

**Practical Objectives**

- Instructor demonstration or video of lead abatement procedures.

## ICA-335 Mould Remediation

### Learning Outcomes

- Demonstrate knowledge of hazards and safe work practices pertaining to mould remediation.
- Demonstrate knowledge of mould remediation procedures, their applications and procedures for use.

### 2025 NSOS Sub-Tasks

- 1.01 Uses personal protective equipment (PPE) and safety equipment
- 1.02 Maintains safe work environment
- 12.02 Performs mould remediation

### Suggested Hours:

9 Hours

### Theoretical Objectives

1. Identify hazards and describe safe work practices related to mould remediation.
  - i) PPE
  - ii) exposure risks
  - iii) respiratory hazards
  - iv) worker decontamination requirements
2. Explain causes of mould growth.
  - i) excess moisture
  - ii) high humidity
  - iii) water intrusion
3. Describe mould remediation methods.
  - i) wet vacuum
  - ii) HEPA vacuum
  - iii) discard method
  - iv) chemical disinfection
4. Describe procedures used to verify the scope of mould remediation.
  - i) worksite assessment
  - ii) moisture source identification
5. Identify equipment used for mould remediation and describe their applications.
  - i) HEPA vacuums

- ii) wet vacuums
  - iii) cleaning tools
6. Describe the selection and use of HAZMAT PPE for mould remediation.
- i) respiratory protection
  - ii) disposable gloves
  - iii) protective clothing
  - iv) eye protection
7. Describe procedures used to disinfect substrates.
- i) damp wiping
  - ii) detergent cleaning
  - iii) chemical disinfection
8. Describe methods used to verify remediation completion.
- i) visual inspection
  - ii) odour assessment
  - iii) moisture control verification

### **Practical Objectives**

- Instructor demonstration or video of mould remediation procedures.

## ICA-340 Asbestos Abatement

### Learning Outcomes

- Demonstrate knowledge of hazards and safe work practices pertaining to asbestos abatement.
- Demonstrate knowledge of asbestos abatement methods.
- Demonstrate knowledge of procedures used to complete and verify asbestos abatement work.

### 2025 NSOS Sub-Tasks

- 1.01 Uses personal protective equipment (PPE) and safety equipment
- 1.02 Maintains safe work environment
- 12.03 Performs asbestos abatement

### Suggested Hours:

9 Hours

### Theoretical Objectives

1. Identify hazards and safe work practices associated with asbestos abatement.
  - i) PPE
  - ii) exposure risks
  - iii) respiratory hazards
  - iv) worker decontamination requirements
2. Identify equipment and accessories used for asbestos abatement and describe their applications and procedures for use.
  - i) containment & negative air systems
  - ii) HEPA filtration & vacuum systems
  - iii) decontamination equipment
  - iv) decontamination showers (portable or collapsible)
  - v) tools for removal
  - vi) airflow & ducting accessories
  - vii) waste handling & disposal
  - viii) testing & monitoring
3. Identify the types and classifications of asbestos.
  - i) Type 1
  - ii) Type 2
  - iii) Type 3

4. Describe asbestos abatement methods.
  - i) removal
  - ii) encapsulation
  - iii) enclosure
5. Identify tools and equipment used in asbestos abatement and describe their applications and procedures for use.
  - i) HEPA vacuums
  - ii) Scrapers
  - iii) chipping hammers
  - iv) disposal bags
6. Explain principles and requirements for removing asbestos-containing material.
7. Describe methods for verifying abatement completion.
8. Describe the procedures used to remove and dispose of temporary enclosures.

**Practical Objectives**

- Instructor demonstration or video of asbestos abatement procedures.

## ICA-345 Program Review

### Learning Outcomes:

- Demonstrate knowledge of the Nova Scotia Occupational Standard and its relationship to the Certification Examination.
- Demonstrate knowledge of overall comprehension of the trade in preparation for the Certification Examination.

### 2025 NSOS Sub-Tasks

Entire Nova Scotia Occupational Standard (NSOS).

### Suggested Hours:

30 Hours

### Theoretical Objectives:

1. Define terminology associated with an NSOS.
  - i) major work activities (MWA)
  - ii) tasks
  - iii) sub-tasks
2. Explain how an NSOS is developed and the link it has to the Certification Examination.
  - i) development
  - ii) validation
  - iii) MWA and task weighting
  - iv) examination breakdown (pie-chart)
3. Identify Nova Scotia and Red Seal products and describe their use for preparing for the Certification Examination.
  - i) Nova Scotia Apprenticeship Agency website
    - study guide
    - learning supports
  - ii) Red Seal website
    - Red Seal exam preparation guide
4. Explain the relationship between the NSOS and the Curriculum Standard.
5. Review common occupational skills for the Industrial Coatings Applicator trade as identified in the NSOS.
  - i) safety-related functions
  - ii) tools and equipment
  - iii) organizes work
  - iv) routine trade activities

- v) communication and mentoring techniques
6. Review process to prepare substrates for the Industrial Coatings Applicator trade as identified in the NSOS.
    - i) general substrate preparation
    - ii) metal substrates
    - iii) concrete substrates
    - iv) synthetic substrates
    - v) wood substrates
  7. Review process to perform hazardous material (HAZMAT) abatement for the Industrial Coatings Applicator trade as identified in the NSOS.
    - i) preparation
    - ii) lead abatement
    - iii) mould remediation
    - iv) asbestos abatement
  8. Review process to prepare and apply coatings and mastics for the Industrial Coatings Applicator trade as identified in the NSOS.
    - i) applies coatings with hand tools and spray equipment
    - ii) applies specialty coatings and mastics

**Practical Objectives**

N/A

## Feedback and Revisions

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This curriculum standard will be amended periodically; comments or suggestions for improvements should be directed to:

Nova Scotia Apprenticeship Agency  
7071 Bayers Road, Suite 2007  
Halifax, NS, B3L 2C2  
Tel: 902-424-5651  
Toll Free in NS: 1-800-494-5651  
[www.nsapprenticeship.ca](http://www.nsapprenticeship.ca)

Any comments or suggestions received will be reviewed and considered to determine the course of action required. If the changes are deemed to be minor, they will be held for implementation during the next review cycle. If immediate change is deemed appropriate, it will result in a revision to this version of the NSCS and will be detailed in the following section.

### Version Changes

Revision Date	Revision	Implementation Date

