NOCTI

Partner Micro-Credential Blueprint

SEMI FOUNDATION

Cleanroom Operations and Safety in Semiconductor Manufacturing Micro-Credential

Codes: 9377

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General Assessment Information

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Test Type: This micro-credential was developed by NOCTI for SEMI Foundation. Subject matter experts were recruited by SEMI Foundation from its education and industry connections to ensure the assessment reflects current industry expectations and practices.

CIP Code

15.0616 - Semiconductor Manufacturing Technology/Technician

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Career Cluster
Manufacturing

O*NET™ in*it

51-9141.00 - Semiconductor Processing Technicians

SEMI FOUNDATION

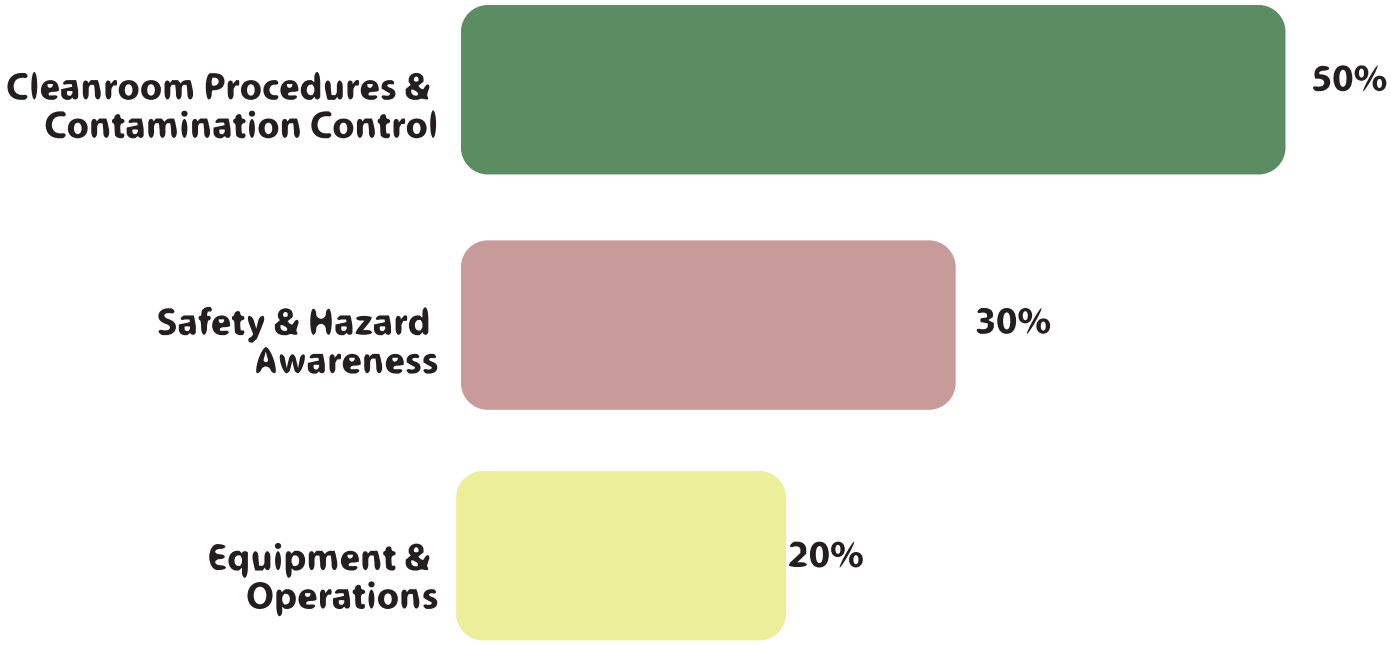
The SEMI Foundation supports the development of a diverse, skilled semiconductor workforce by advancing equitable access to education, career pathways, and industry connections. Through partnerships with schools, community organizations, and employers, the SEMI Foundation works to strengthen talent pipelines and expand opportunities in semiconductor manufacturing and advanced technology careers.

Written Assessment

NOCTI written assessments consist of questions to measure an individual's factual theoretical knowledge.

Administration Time: 1 hour and 30 minutes
Number of Questions: 50

Areas Covered



Specific Standards and Competencies Included in this Assessment

Cleanroom Procedures and Contamination Control

- Follow cleanroom and contamination control procedures
- Handle materials and products in a cleanroom environment
- Apply ESD control and environmental protection measures
- Respond to contamination events and maintain documentation

Safety and Hazard Awareness

- Identify laboratory fundamentals and safe work practices
- Interpret hazard communication information
- Recognize and respond to laboratory hazards

Equipment and Operations

- Explain lab equipment and operations
- Follow Standard Operating Procedures (SOPs)
- Monitor equipment status (including abnormal conditions)
- Documentation, reporting, and communication

Sample Questions

A technician accidentally contaminates a component but believes no product was affected. What should the technician do?

A. Stop work, report the contamination, and follow the required procedure.
B. Remove the contaminants and continue working.
C. Wipe the parts with isopropyl alcohol and return to work as normal.
D. Wait to see if a problem occurs, then dispose of the product.

A machine is expected to have downtime throughout several shifts. What is the appropriate communication between shifts for Lock Out/Tag Out (LOTO) procedures?

A. Send a company-wide email.
B. Notify the machine's manufacturer.
C. Verify the de-energized state, add new lock, then remove original lock.
D. Make sure that all circuit breakers are off and labeled correctly.

The primary purpose of a scrubber system in a semiconductor fab is to

A. polish wafers during processing
B. remove hazardous gases and chemicals from exhaust streams
C. provide filtered air to the cleanroom environment
D. control temperature in process areas