

Safety Education and Training

NIST S 7101.23

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1. PURPOSE

The purpose of the Safety Education and Training suborder is to articulate NIST safety education and training requirements, roles, responsibilities, and authorities.

2. BACKGROUND

The safety education and training requirements, roles, responsibilities, and authorities in this suborder supersede those in NIST Administrative Manual Subchapter 12.01, Safety Operational System.

3. APPLICABILITY

a. This suborder applies to all NIST employees and covered associates.

b. This suborder covers:

(a) NIST General Safety Training;

(b) Training specified in NIST occupational safety and health (OSH) suborders;

(c) Training required by hazard reviews conducted in accordance with the requirements of the NIST S 7101.20: Work and Worker Authorization Based on Hazard Reviews;

(d) Training required for Line Managers, Safety and Health Specialists, and OU/Division Safety Personnel (Full-Time and Collateral-Duty);

(e) Training required for Official First-Level Supervisors; and

¹ For revision history, see Appendix A.

- (f) Training specified by the Office of Safety, Health, and Environment (OSHE) based on special circumstances.

4. REFERENCES

- a. Occupational Safety and Health Act of 1970, as amended, [29 United States Code \(U.S.C.\) § 651 et seq.](#)
- b. [Executive Order \(E.O.\) 12196](#), Occupational Safety and Health Programs for Federal Employees (1980)
- c. [29 CFR 1960](#), Basic Program Elements for Federal Employee Occupational Health and Safety Programs and Related Matters, Sections 54-59

5. APPLICABLE NIST OCCUPATIONAL SAFETY AND HEALTH SUBORDERS

- a. NIST O 7101.00: Occupational Safety and Health Management System
- b. NIST S 7101.01: Safety Rights and Responsibilities
- c. NIST S 7101.02: Employee Reporting of Unsafe or Unhealthful Working Conditions (UWC)
- d. NIST S 7101.03: Stop Work
- e. NIST S 7101.05: Management Observation Process
- f. NIST S 7101.20: Work and Worker Authorization Based on Hazard Reviews ([Hazard Reviews](#))
- g. NIST S 7101.24: Incident Reporting and Investigation

6. REQUIREMENTS

NIST must meet the safety education and training requirements established by the Occupational Safety and Health Administration (OSHA) in [29 CFR 1960](#), Basic Program Elements for Federal Employee Occupational Health and Safety Programs and Related Matters, Standards 54-59. The following requirements achieve that objective.

a. General Training Requirements

- (1) All employees and covered associates entering on duty other than Facility Users shall complete training provided by OSHE on general NIST safety policies and procedures, including employee rights and responsibilities ([“NIST General Safety Training”](#)).

b. Specific Training Requirements

- (1) All employees and covered associates other than Facility Users, including employees and covered associates entering on duty, shall complete:

(a) The training specified in OSH suborders applicable to the work they are to conduct;² and

(b) The activity-specific training, to be provided by the OUs, required by hazard reviews applicable to the work they are to conduct.

- (2) Line Managers, Safety and Health Specialists, and OU/Division Safety Personnel (Full-Time and Collateral-Duty) shall complete, in addition to the training in Section 6b(1), training provided by OSHE on:

(a) Section 19 of the OSH Act;

(b) Executive Order 12196;

(c) 29 CFR 1960; and

(d) NIST O 7101.00, including:

i. OSH-management-system requirements, roles, responsibilities, and authorities;

ii. The Management Observation suborder;

iii. The Hazard Review suborder;

iv. The Safety Education and Training suborder;

² Training specified in an OSH suborder could be (a) training that is to be provided by OSHE, e.g., training on the associated OSH program (see definition of “Training on an OSH Program” in Section 7), or (b) training that is to be provided by the employee’s or covered associate’s OU, e.g., job-, activity-, or task-specific training.

- 115 v. The Safety Rights and Responsibilities suborder;
116
117 vi. The Employee Reporting of Unsafe and Unhealthful Working Conditions
118 suborder, including procedures for reporting and investigating employee
119 allegations of reprisal for raising safety concerns;
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121 vii. The Stop Work suborder; and
122
123 viii. The Incident Reporting and Investigation suborder.
124
- 125 (3) Official First-Level Supervisors shall complete, in addition to the training in Sections
126 6b(1) and 6(b)(2), introductory and specialized courses and materials that will enable
127 supervisors to recognize and eliminate, or reduce, OSH hazards in their working units
128 (see [29 CFR 1960.55](#)), including, at a minimum, training on the OSH programs
129 applicable to the work to be supervised.
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- 131 (4) Affected employees and covered associates other than Facility Users shall complete
132 training specified by OSHE based on special circumstances, such as:
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134 (a) Major changes in an OSH program;
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136 (b) The identification of a material weakness in an OSH program;
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138 (c) New regulatory requirements; or
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140 (d) Regulatory notices of violation or similar actions.
141
- 142 c. Assignment of Training to Employees and Covered Associates Other than Facility Users
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- 144 (1) Official first-level supervisors shall assign training to the employees and covered
145 associates they supervise, other than Facility Users, in accordance with the requirements
146 in Section 6b and they shall do so when:
147
148 (a) Such employees and covered associates enter on duty;
149
150 (b) Such employees' and covered associates' duties change with regard to safety;³ and
151
152 (c) Special circumstances arise such as those indicated in Section 6b(4).

³ For example, the employee or covered associate is to conduct work involving new OSH hazards, the employee is assigned to a line-management position for the first time, or the employee is assigned new collateral-safety duties.

d. Training for Facility Users

(1) Facility Users shall complete the following safety training prior to commencing work involving significant hazards, and any re-training and/or refresher training required by the User Facility:

(a) Training on pertinent User Facility safety policies and procedures;

(b) User-Facility-required courses; and

(c) Training on specific jobs and tasks to be performed, including, for example, SOPs and “how to” demonstrations.

e. Training Provided by OSHE

(1) Training provided by OSHE shall be made available in one or more of the following training formats:

(a) Instructor-led training;

(b) Demonstration or supervised practice; and

(c) Computer-based training, which may be used alone or in conjunction with instructor-led training and demonstration or supervised practice.

(2) Training provided by OSHE should include:

(a) Training objectives;

(b) Learning assessments, such as quizzes, checklists, or demonstrations, to demonstrate that training objectives have been met; and

(c) Evaluation tools, such as surveys, to obtain feedback at the end of the training for the purpose of improving the training.

f. Training Documentation⁴ and Recordkeeping

(1) Training specified in Section 6b that is to be provided by OSHE shall be documented and its completion by affected employees and covered associates shall be recorded in NIST's electronic safety-training application, regardless of the training format.

(2) Training specified in Sections 6b and 6d that is to be provided by the OUs⁵ shall be documented and its completion by affected employees and covered associates shall be recorded in accordance with OU procedures.⁶

g. Administration of NIST's Electronic Safety-Training Application:

(1) Individuals shall be assigned by their OUs to assist in the administration of NIST's electronic safety-training application.

7. DEFINITIONS

a. Documenting Training – The act of producing and maintaining training documentation (see definition of "Training Documentation").

b. Facility User – Any individual who is permitted to use designated NIST facilities under a NIST Facility User Agreement. Designated NIST facilities include the NIST Center for Neutron Research and the Center for Nanoscale Science and Technology.

c. Line Managers – For the purposes of this suborder, the following or equivalent: NIST Director, Associate Directors, OU Directors and Deputy Directors, Division Chiefs, Deputy Division Chiefs, Group Leaders, and any Official Supervisors below the level of Group Leader.

d. NIST General Safety Training – Training provided by OSHE on general NIST safety policies and procedures.

e. Training on an OSH Program – Training provided by OSHE that includes:

(1) An overview of the requirements of an OSH program and associated roles and responsibilities;

⁴ See definition of "Training Documentation" in Section 7.

⁵ This includes (a) training specified in OSH suborders that is to be provided by the OUs, and (b) activity-specific training required by hazard reviews.

⁶ OUs may elect to document and record activity-specific training required by hazard reviews in NIST's electronic safety-training application.

(2) For OSH programs focused on OSH hazards, baseline knowledge on the identification, assessment, and control of those hazards; and

(3) Other relevant safety information.

- f. Official First-Level Supervisor (of Another Employee or of a Covered Associate) – The Rating Official on the performance plan of another employee or the supervisor of a covered associate.
- g. OU/Division Safety Personnel – Employees who have been designated to perform OSH-related duties in support of their OUs or Divisions on a full- or part-time basis.
- h. Recording Training – The act of creating a training record (see definition of “Training Record”).
- i. Safety and Health Specialist – A professional in occupational safety, industrial hygiene, health physics, or a related field.
- j. Training Documentation – Materials in electronic or hard-copy form that describe or embody the content of the training; any tools used to determine that training objectives have been met, *e.g.*, quizzes or checklists; and any evaluation tool(s) used to gather feedback at the end of the training, *e.g.*, surveys.
- k. Training Record – (a) A document evidencing the completion of training, including the subject of the training, the name of the individual who completed the training, the date on which the training was completed, and, when applicable, the name of the individual responsible for certifying that the training was completed; (b) any completed quizzes, checklists, or surveys.

8. ACRONYMS

- a. NIST – National Institute of Standards and Technology
- b. OSH – Occupational Safety and Health
- c. OSHA – Occupational Safety and Health Administration
- d. OSHE – Office of Safety, Health, and Environment
- e. OU – Organizational Unit

268 **9. ROLES AND RESPONSIBILITIES**

269 a. OU Directors:

270
271 (1) Ensure that procedures are implemented for documenting and recording the completion
272 by affected employees and covered associates other than Facility Users of:

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274 (a) Training specified in OSH suborders that is to be provided by the OU; and

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276 (b) Activity-specific training required by hazard reviews; and

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278 (2) Ensure that individuals are designated to assist in the OU's administration of NIST's
279 electronic safety-training application.

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281 b. Directors of NIST User Facilities:

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283 (1) Ensure that Facility Users meet the training requirements detailed in Section 6d; and

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285 (2) Ensure that procedures are implemented for documenting and recording the completion
286 by Facility Users of the training specified in Section 6d.

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288 c. All Employees and Covered Associates Other than Facility Users Entering on Duty:

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290 (1) Complete NIST General Safety Training;

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292 d. All Employees and Covered Associates Other than Facility Users, Including Employees and
293 Covered Associates Entering on Duty:

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295 (1) Complete the training in Section 6b assigned to them by their Official First-Level
296 Supervisors; and

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298 (2) Request additional training as duties change or as otherwise needed.

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300 e. Official First-Level Supervisors of Employees and Covered Associates Other than Facility
301 Users (in addition to the responsibilities of All Employees):

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303 (1) Assign training to the employees and covered associates they supervise in accordance
304 with the requirements in Section 6b and do so when:

305
306 (a) Such employees and covered associates enter on duty;

(b) Such employees' and covered associates' duties change; and

(c) Special circumstances arise such as those indicated in Section 6b(4).

(2) Ensure that the following training is documented and its completion by affected employees and covered associates recorded in accordance with OU procedures:

(a) Training specified in OSH suborders that is to be provided by the OU; and

(b) Activity-specific training required by hazard reviews.

f. Chief Safety Officer:

(1) Ensure that an electronic safety-training application for documenting, assigning, and recording training is maintained by OSHE; and

(2) Ensure that the training specified in Sections 6a, 6b(2), and 6b(4) is available, meets the requirements in Section 6d, and is documented in NIST's electronic safety-training application.

g. OSHE Safety Program Managers:

(1) Articulate the training requirements for their assigned OSH programs in the associated OSH suborders; and

(2) When an OSH suborder indicates that training specified in the suborder is to be provided by OSHE, ensure that:

(a) The training is available;

(b) The training meets the requirements in Section 6d;

(c) The training is documented in NIST's electronic safety-training application; and

(d) The completion of the training by affected employees and covered associates is recorded in NIST's electronic safety training application, regardless of the training format.

h. Individuals Designated by their OU to Assist in the Administration of NIST's Electronic Safety-Training Application Within the OU:

(1) Carry out their assigned duties.

10. AUTHORITIES

a. Chief Safety Officer:

(1) Upon request and with suitable justification, approve training provided by one or more OUs as an alternative to training provided by OSHE; and

(2) Delegate the aforementioned authority to other OSHE employees.

11. DIRECTIVE OWNER

Chief Safety Officer

12. APPENDICES

A. Revision History

Appendix A. Revision History

Version No.	Approval Date	Effective Date	Brief Description of Change; Rationale
1	03/20/14	04/01/15	None – Initial document
2	01/12/16	01/12/16	<ul style="list-style-type: none"> • Made suborder applicable to “covered associates”. • Revised Section 6 to establish separate training requirements for Facility Users versus other covered associates. • Added definition of “Facility Users” to Section 7. • Added responsibilities for the Directors of NIST User Facilities to Section 9. • Rationale for separate training requirements for Facility Users: <ul style="list-style-type: none"> ○ Short-term visits; ○ Limited access to NIST site and facilities; ○ No NIST IT accounts; ○ Specifically-scoped activities; and ○ Greater oversight of work by User Facility personnel.
3	12/23/2020	1/12/16	Updated links under References and Applicable Suborders. Added responsible person column in Revision History table.
4	1/11/2022	1/12/16	<ul style="list-style-type: none"> • Updated “NIST O 710” link path.
5	1/11/23	1/12/16	Added links for NIST safety directives