

ATTACHMENT C

**NIOSH Spirometry Training Program
Initial Course Application**

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TRAINING REQUIREMENTS OF THE COTTON DUST STANDARD

Authority for approval of training courses in pulmonary function testing as required in the Cotton Dust Standard, 29 CFR 1910.1043, has been delegated to the National Institute for Occupational Safety and Health.

In order to expedite processing of applications for approval, it would be appreciated if you electronically submit your copy of all material requested. Materials may also be mailed.

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The Pulmonary Function Testing Course Approval application which provides guidelines for faculty, content, and equipment is attached along with model course objectives and Appendix D of the Cotton Dust Standard.

Public reporting burden of this collection of information is estimated to average 8 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to CDC/ATSDR Information Collection Review Office, 1600 Clifton Road NE, MS H21-8, Atlanta, Georgia 30333; ATTN: PRA (0920-0138).

NIOSH Spirometry Training Initial Course Application

Please carefully complete all the questions below (print or type). The course content requirements are derived from the Cotton Dust Standard and additional NIOSH requirements. You will be requested at the end of this form to certify that in your professional judgment, you meet these minimum requirements.

1. Sponsoring Organization or Proprietary Agency (includes LLC), Name, Mailing Address, Telephone Number, and e-mail:

Applicant name, title, and email for correspondence: _____

2. Course Director Qualification

The Course Technical Director is the person professionally responsible for the content of the course and shall be an active, participating supervisor/coordinator of course faculty and activities.

Submit course director's curriculum vitae with this application.

The course technical director should be either:

- a) A physician who has at least 3 years training and experience in the technical procedures and equipment for spirometry testing and in the diagnosis of occupational lung diseases or 1 year experience supervising a Pulmonary Function Laboratory, or
- b) A health professional with an advanced degree in pulmonary physiology or related field who has at least 3 years training and experience in the technical procedures and equipment for spirometry testing (e.g., Ph.D. in pulmonary physiology, bioengineering, etc.), or
- c) A health professional with licensure/professional certification in the pulmonary function testing field with at least 3 years documented experience under supervision of individuals in Subsection (a) or (b).

Course Director's Name _____

Professional Degree (Specify Schools and Dates):

Licensure and Certifications (specify licensing/certifying bodies and dates):

3. Faculty Qualifications

The course director shall assure that the lecturers and practicum instructors have adequate educational backgrounds and experience to cover the required material. Small groups are to be used for the practicum sessions and a minimum of one instructor shall be provided for each group of six students.

Submit a curriculum vitae for each faculty applicant and list qualifications for all lecturers and instructors and attach to this application. Submit a copy of the NIOSH course certificate awarded to each practicum instructor.

Each course lecturer must meet one the following criteria:

- a) A faculty-level member of the institution (MD or PhD) with at least 1 year of teaching experience at the collegiate level or equivalent (basic anatomy and physiology or some course related to spirometry), or
- b) An instructor-level member of the institution (RN, RRT, MS) with greater than 50% of workload dedicated to teaching or with at least 3 years teaching experience, or
- c) A health professional with licensure or professional certification in the pulmonary function testing field with at least 3 years documented teaching experience under the supervision of individuals described in 1. or 2. above.

Each practicum instructor shall have:

- a) At least 3 years' experience in background, training, and the practical aspects of collecting spirometry data (e.g., occupational health nurses or pulmonary function technicians) and
- b) Hold a current NIOSH-approved spirometry course certificate.

Number of expected students (1 practicum instructor/6 students must be maintained) _____

4. Course Design, Content, and Frequency

Communication with course attendees prior to the course should include an assessment of prior spirometry testing experience and information on specific types of spirometers that the students currently use or intend to use. Instructors may review with each student test report obtained by the student on his/her spirometer prior to attending the course or as provided by the instructor.

- a. Course Design should consist of approximately 16 hours of instruction, including at least
 - 1. Four hours of formal lectures and/or audio visual material,
 - 2. Eight hours of small group practical instruction with no more than six students per instructor,
 - 3. Two hours per student devoted to evaluation and testing of the student’s spirometric testing skills.
 - 4. Two hours to be used at the course director’s discretion for pertinent activities or topics.

- b. Course Content (for the requirements in (4.a.)) should include
 - 1. Basic physiology of the forced vital capacity maneuver and the determinants of airflow limitation with emphasis on the relation to repeatability of results.
 - 2. Instrumentation requirements including calibration procedures, sources of error, and their correction.
 - 3. Performance of testing including subject coaching, recognition of improperly performed maneuvers, and corrective actions.
 - 4. Data quality with emphasis on repeatability.
 - 5. Actual use of the equipment under supervised conditions.
 - 6. Measurement of tracings and calculations of results.

If a substantial amount of material exclusive of the above, i.e., beyond minimum requirements as set forth in The Cotton Dust Standard is taught, it must be taught in addition to the minimum 16 hours of course time.

The applicant’s course offering will have:

Hours of Lecture	_____
Hours of Practicum	_____
Hours of Evaluation	_____
Hours of Extra Activity	_____

An agenda showing lecture topics, time allocations, and lecturers’ names must be attached to this application.

c. Course Frequency

Each course director must teach at least one course and a total of five students each calendar year. Failure to meet these minimum requirements will result in suspension of course approval.

5. List of Course Equipment

a. Spirometers

At least one Spirometry System shall be provided for every six students. All of the spirometers used must meet the minimum equipment requirements according to the Cotton Dust Standard (CFR Section 1910.1043, Appendix D. I, a to j) and current ATS/ERS standards. See attached. List specific equipment below.

Manufacturer	Model	Approximate Date Acquired
1.		
2.		
3.		
4.		
5.		

b. Calibration Syringes

There shall be a minimum ratio of one 3 liter calibrating syringe for every two spirometry systems. List the manufacturer and current manufacturer's calibration certification date.

Manufacturer	Current manufacture's calibration certification date
1.	
2.	
3.	

6. Course Materials

Course materials should adequately cover the required course content (Item 4b above). NIOSH has developed a course outline and other materials that you may use to develop your own curriculum. Submit one copy of all instructional materials, including PowerPoint, internet links, and student handouts. You will be required to use standardized evaluation materials, specifically, the written examination and the criteria used to evaluate student performance (practical examination) provided by NIOSH.

7. Certificate of Course Completion

A certificate showing satisfactory completion of the course must be provided to each trainee. The certificate should contain the following information

1. A non-removable watermark
2. Course director's signature
3. Course dates
4. NIOSH-approved Sponsorship Course approval number
5. A statement that the certificate is valid for 5 years and 7 months from the date of the course
6. Any CEUs awarded

A sample of the NIOSH-approved Course Sponsor's certificate must be submitted.

NOTE: NIOSH's approval of the course means that the Course Sponsorship meets the minimum technical requirements for teaching spirometry testing as set forth in the Cotton Dust Standard (29 CFR 1910.1043 and 1910.1046). **It does not constitute NIOSH certification of individuals completing the course.**

8. Notification Procedures

Any changes in course faculty, content, or equipment must be reported to NIOSH for approval.

All dates of prospective courses must be submitted to NIOSH at least 30 days prior to such courses. (Telephone or electronic notification, as soon as course date is known, is required in cases when a course is scheduled without time for the 30 day notice).

The sponsor will provide NIOSH with course dates, location (city, state, country), and the number of students for each course completed on an annual basis. A reporting form is available on the password-secured site for course directors (SAMS) accessed via the NIOSH web page. **Please submit this form (or email with similar format) to STPReports@cdc.gov.**

Course Director Certification

I hereby certify that I have reviewed and understand the Medical Surveillance Requirements as stated in the Cotton Dust Standard. I certify that course content, materials, equipment and faculty are adequate and meet minimum requirements. I have completed this form as accurately and fully as possible. I understand that if during a NIOSH site visit the course does not comply with the application criteria and statement I have made, approval will be withdrawn.

Course Director Signature

Date

