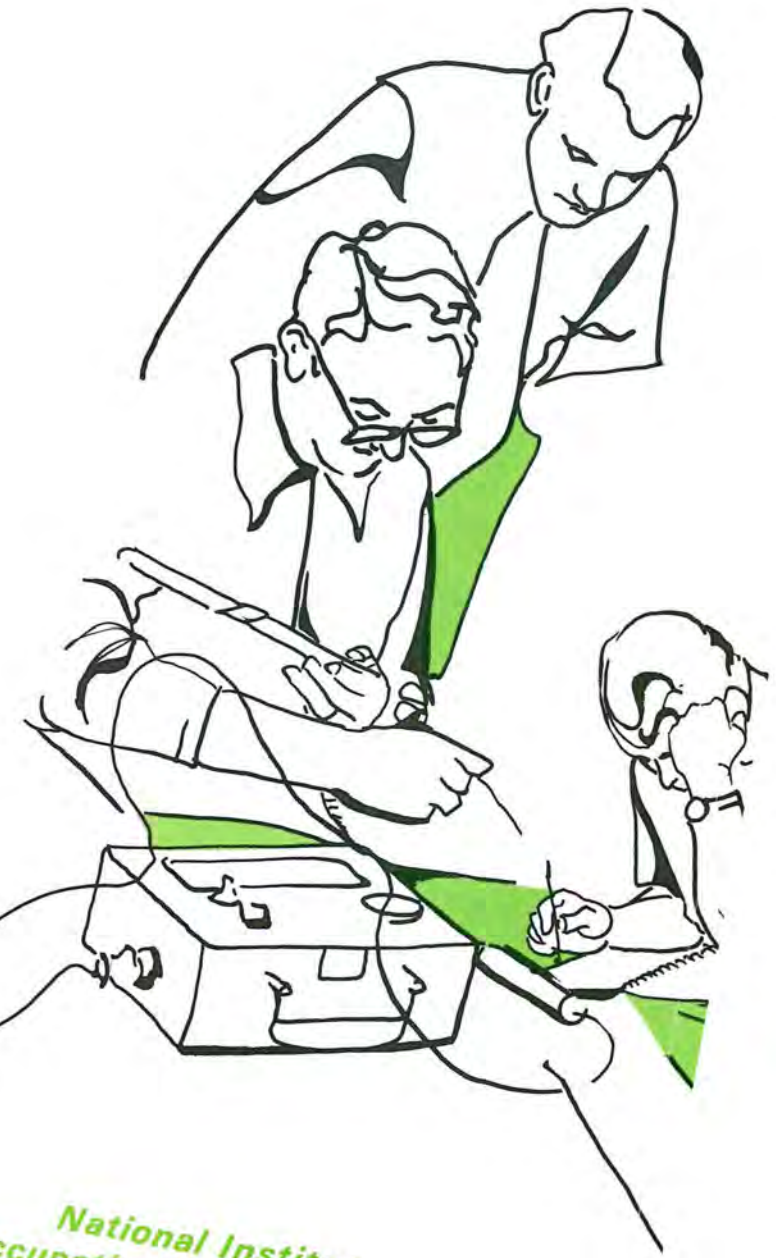
a learning experience in occupational safety and health

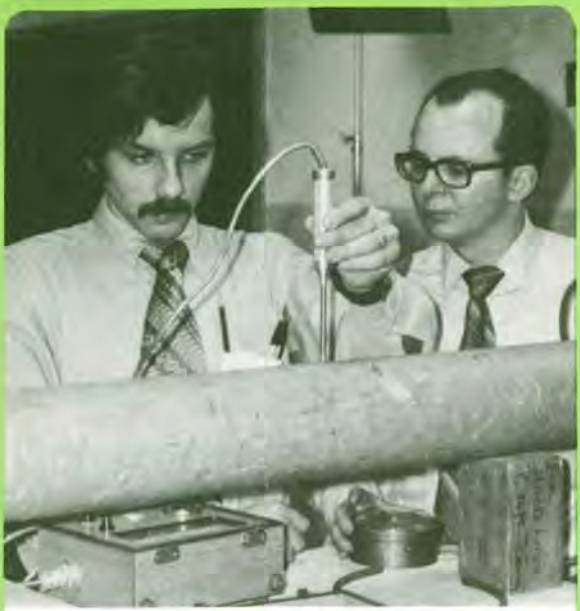


National Institute for
ccupational Safety and Health

Division of Training

Course Announcement
July 1973 – June 1974

The Division of Training of the National Institute for Occupational Safety and Health (NIOSH) is pleased to present its course listings for Fiscal Year 1974. Included in the following course summaries you may find several with which you are familiar. These "old standbys" have been updated to include new information and techniques developed within NIOSH — good introductions for new safety and health professionals and excellent refreshers for the experienced. You will also notice several new course titles which have been developed to meet a growing demand for training in these specialized areas. We hope that one of the following courses will meet your particular needs; if not, tell us your problem and we will do our best to design a training experience that will solve it.



INTRODUCTION TO INDUSTRIAL SAFETY (508)

. . . is intended for individuals responsible for improving or promoting a safe work environment for employees. The identification of industrial safety hazards, measurements of the quality and effectiveness of a safety program, and the latest techniques of accident prevention are emphasized.

INTRODUCTION TO OCCUPATIONAL SAFETY AND HEALTH (509)

. . . is intended to familiarize the trainee with the sources of potential hazards in the work environment, the effects of excessive exposure on the worker and the basic kinds of hazard control such as ventilation, substitution of processes, and appropriate protection devices. Participants will be shown how to identify hazardous conditions in certain occupational situations, to understand and interpret major parts of the OSHA Act of 1970 and its legal ramifications, and to recommend a type of control measure given a measured hazard.

RECOGNITION, EVALUATION, AND CONTROL OF OCCUPATIONAL HAZARDS (549)

. . . is essentially the same as the "550," except laboratories become demonstrations. This course can be augmented by topics described in other courses or otherwise altered to better fulfill the needs of the requesting agency. Date, location and length of this course should be negotiated with the Division.

INDUSTRIAL HYGIENE MEASUREMENTS (550)

. . . is approximately 50 percent lectures to acquaint trainees with various sampling instruments and the principles and standards which govern their use. The remainder of the course time is spent in laboratory sessions in the calibration and use of the instruments.

INDUSTRIAL HYGIENE ENGINEERING (551)

. . . is designed for engineers and industrial hygienists who have had several years of experience related to occupational health, including methods of recognition and evaluation of hazardous occupational situations. The primary purpose of this course is to enable the trainee to select, design and apply adequate control measures in the plant.

SAFETY IN THE LABORATORY (580)

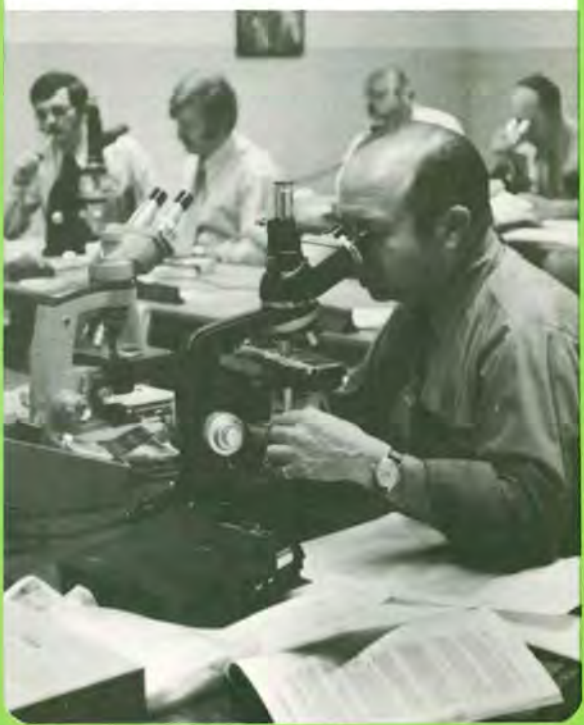
. . . provides an opportunity to introduce new laboratory personnel to basic lab safety, as well as for the reindoctrination of existing staff members. Techniques to minimize the occurrence of injury in the laboratory including the design and construction of laboratory equipment and facilities are introduced.

INDUSTRIAL NOISE (581)

. . . covers the fundamentals, measurement, reduction and/or elimination of noise exposure in an industrial environment. Each participant will be shown how to recognize and evaluate a hazardous noise exposure, measure noise exposure with appropriate instruments, and apply basic engineering control methods to the existing problem.

SAMPLING AND EVALUATING AIRBORNE ASBESTOS DUST (582)

. . . is designed for those responsible for the sampling and/or evaluation of asbestos dust. Included topics are: recommended microscope specifications, calibration procedures, sampling times, fiber counting, time weighted averages and calculating concentrations. This comprehensive treatment of sampling and counting is a "must" for personnel with newly acquired responsibilities for maintaining safe levels of asbestos in the work place.



TENTATIVE SCHEDULE OF COURSES
FY 1974

Courses are held in Cincinnati unless otherwise noted

Dates 1973	Course
July 10-12	Sampling & Evaluating Airborne Asbestos Dust (582)
July 17-19	Heat Stress (585)
July 23-Aug. 2	Industrial Hygiene Measurements (550)
Aug. 6-17	Industrial Hygiene Engineering (551)
Aug. 20-30	Industrial Hygiene Measurements (550)
Sept. 4-6	Sampling & Evaluating Airborne Asbestos Dust (582)
Sept. 10-21	Radiation Hazards in the Occupational Environment (591) Chicago
Sept. 17-18/19-21	Setting Up An Industrial Hygiene Laboratory/Industrial Hygiene Laboratory Accreditation (586/587)
Sept. 17-27	Industrial Hygiene Measurements (550)
Oct. 1-12	Industrial Hygiene Measurements (550) New Jersey
Oct. 15-19	Recognition, Evaluation & Control of Occupational Hazards (549) Akron, O.
Oct. 23-25	Sampling & Evaluating Airborne Asbestos Dust (582)
Oct. 29-Nov. 2	Introduction to Industrial Safety (508)
Nov. 5-16	Industrial Hygiene Engineering (551)
Nov. 19-21	Sampling & Evaluating Airborne Asbestos Dust (582)
Nov. 27-29	Heat Stress (585)
Dec. 3-7	Introduction to Occupational Safety & Health (509)
Dec. 10-11/12-14	Setting Up An Industrial Hygiene Laboratory/Industrial Hygiene Laboratory Accreditation (586/587)
Dec. 17-21	Safety in the Laboratory (580)

continued on reverse

Registration

Please enroll the following person for the course indicated on the reverse. Alternate choice of course date has been indicated in the event that the first choice has been filled.

- ☐ Tuition enclosed
- ☐ Tuition will be received by your office at least four weeks prior to the opening date of the course in order to hold my reservation.

Name _____

Title _____ Highest Degree _____

Company _____ Phone _____

Home Address _____

City _____ State _____ Zip Code _____

Make all checks and money orders payable to the
NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH.

Send further information about

_____

_____

Course Title

Requests for training at the location and date of your choice and requests for courses designed to meet your specific needs should be directed to the Chief, Environmental Management Branch. Our instructors also participate in cooperative training with other organizations and furnish speakers for a single lecture or series of lectures. Unless otherwise indicated, courses listed on the reverse are presented in the training facilities at Cincinnati.

Mail to:

Chief, Environmental Management Branch
Division of Training, NIOSH
1014 Broadway
Cincinnati, Ohio 45202

Introduction to Industrial Safety (508)
Length: 5 days Tuition: $250
☐ October 29, 1973
☐ January 14, 1974
☐ April 15, 1974

Introduction to Occupational Safety and Health (509)
Length: 5 days Tuition: $250
☐ December 3, 1973
☐ June 10, 1974

Recognition, Evaluation and Control of Occupational Hazards (549)
Length: 5 days Tuition: $350
☐ October 15, 1973 (Akron, Ohio)
☐ April 8, 1974
☐ May 13, 1974
☐ June 17, 1974
☐ June 24, 1974

Industrial Hygiene Measurements (550)
Length: 9 days Tuition: $600
☐ July 23, 1973
☐ August 20, 1973
☐ September 17, 1973
☐ October 1, 1973 (New Jersey)
☐ January 21, 1974
☐ March 18, 1974
☐ April 22, 1974

Industrial Hygiene Engineering (551)
Length: 10 days Tuition: $600
☐ August 6, 1973
☐ November 5, 1973
☐ February 19, 1974

Safety in the Laboratory (580)
Length: 5 days Tuition: $250
☐ December 17, 1973

Sampling and Evaluating Airborne Asbestos Dust (582)
Length: 3 days Tuition: $200
☐ July 10, 1973
☐ September 4, 1973
☐ October 23, 1973
☐ November 19, 1973
☐ January 8, 1974
☐ February 5, 1974
☐ March 5, 1974
☐ April 2, 1974
☐ May 7, 1974
☐ June 4, 1974

Heat Stress (585)
Length: 3 days Tuition: $200
☐ July 17, 1973
☐ November 27, 1973
☐ February 12, 1974
☐ May 28, 1974

Setting Up An Industrial Hygiene Laboratory (586)
Length: 2 days Tuition: $100
☐ September 17, 1973
☐ December 10, 1973
☐ March 11, 1974
☐ June 3, 1974

Industrial Hygiene Laboratory Accreditation (587)
Length: 3 days Tuition: $150
☐ September 19, 1973
☐ December 12, 1974
☐ March 13, 1974
☐ June 5, 1974

Radiation Hazards in the Occupational Environment (591)
Length: 10 days Tuition: $600
☐ Sept. 10, 1973

1974	Course
Jan. 8-10	Sampling & Evaluating Airborne Asbestos Dust (582)
Jan. 14-18	Introduction to Industrial Safety (508)
Jan. 21-31	Industrial Hygiene Measurements (550)
Feb. 5-7	Sampling & Evaluating Airborne Asbestos Dust (582)
Feb. 12-14	Heat Stress (585)
Feb. 19-Mar. 1	Industrial Hygiene Engineering (551)
Mar. 5-7	Sampling & Evaluating Airborne Asbestos Dust (582)
Mar. 11-12/13-15	Setting Up An Industrial Hygiene Laboratory/Industrial Hygiene Laboratory Accreditation (586/587)
Mar. 18-28	Industrial Hygiene Measurements (550)
Apr. 2-4	Sampling & Evaluating Airborne Asbestos Dust (582)
Apr. 8-12	Recognition, Evaluation & Control of Occupational Hazards (549)
Apr. 15-19	Introduction to Industrial Safety (508)
Apr. 22-May 2	Industrial Hygiene Measurements (550)
May 7-9	Sampling & Evaluating Airborne Asbestos Dust (582)
May 13-17	Recognition, Evaluation & Control of Occupational Hazards (549)
June 3-4 /5-6	Setting Up An Industrial Hygiene Laboratory/Industrial Hygiene Laboratory Accreditation (586/587)
May 28-30	Heat Stress (585)
June 4-6	Sampling & Evaluating Airborne Asbestos Dust (582)
June 10-14	Introduction to Occupational Safety & Health (509)
June 17-21	Recognition, Evaluation & Control of Occupational Hazards (549)
June 24-28	Recognition, Evaluation & Control of Occupational Hazards (549)

NONIONIZING RADIATION (583)

. . . is intended for industrial hygienists, health physicists and other professional health personnel as an introduction to nonionizing radiation. The topical areas will include nonionizing radiation sources, the attendant hazards to personnel and the basic principles of control. Evaluation and control of laser and microwave sources are given special emphasis. Using this information, the trainee should be able to: 1) identify a nonionizing radiation source and the radiation emitted, 2) determine the degree of the hazard to exposed personnel, and 3) apply the necessary protective procedures to reduce or eliminate the hazard to personnel.

IONIZING RADIATION (584)

. . . is designed for professional health personnel as an introduction to the concepts of the radiological health field. The topical areas will include radiation sources, detection instruments, and control methods. Particular attention is given to the use of instruments and survey techniques. With this information, the student should be able to: 1) identify a radiation source, 2) select the proper instrument for evaluation of that source, and, 3) recommend, if necessary, the appropriate control methods for personnel protection.

HEAT STRESS (585)

. . . is a three-day course designed for personnel involved in evaluating "hot environments." The trainee will become familiar with the basic concepts of the physiology of heat, the effect of heat on health and performance, physiological measurements, and environmental controls. The latest techniques of evaluating the "hot environment" are presented through lectures, laboratories, and a field trip. At the conclusion of this course the trainee should be able to evaluate an industrial exposure, determine if engineering controls are necessary, and make the appropriate recommendations to reduce the hazards.

SETTING UP AN INDUSTRIAL HYGIENE LABORATORY (586)

. . . provides guidance to the chemist faced with the responsibility of setting up an industrial hygiene laboratory. Requirements for facilities, equipment, and supplies will be developed for typical situations. Selection of specific sampling and analytical procedures to meet the needs and resources of the participants will be guided by the NIOSH staff. Principles and steps in initiating an effective intralaboratory quality control program will be developed. Calibration and maintenance of equipment will be covered.

INDUSTRIAL HYGIENE LABORATORY ACCREDITATION (587)

. . . provides 1) a review of the progress of the AIHA Industrial Hygiene Laboratory Accreditation Program, 2) a survey of the current program, and 3) an analysis of the operational attributes and program considered important for accreditation. Personnel facility, equipment, analytical and quality control procedural elements involved in laboratory accreditation are developed in-depth. Intensive development of an effective intralaboratory quality control system features the NIOSH laboratory Quality Control Manual, TR 78.

INDUSTRIAL VENTILATION (588)

. . . covers the fundamentals of industrial exhaust ventilation including the airflow design of industrial exhaust systems. Measurements, hood selection, general ventilation and duct design are included using the Industrial Ventilation Manual as a text. Each participant is shown how to select and identify appropriate exhaust ventilation systems for industrial processes; measure the performance of exhaust systems using air flow, velocity and pressure measuring instruments; and design industrial exhaust systems.

SAFETY PROGRAM DESIGN AND MANAGEMENT (589)

. . . is designed for engineers, experienced safety professionals, and middle and upper management personnel. Included in the agenda are modern loss control practices and safety program measurement techniques. The student is familiarized with requirement for establishing a safety program, a technique for measuring the performance, and a set of guidelines for improving the many phases of an existing program.

INDUSTRIAL HYGIENE CHEMISTRY (590)

. . . is designed for chemists in the field of occupational health who require specialized information and skills in sampling and analyzing the job environment. Background lectures cover industrial hygiene, toxicology, industrial medicine, and principles pertaining to evaluations of the environment. Various procedures of sample preparation, chemical separation, and analysis are discussed as they apply to occupational samples. Demonstrations and laboratory exercises include air-flow measurements, calibration of direct reading instruments for gases and vapors, dust evaluation techniques, and specific analytical techniques such as atomic absorption spectroscopy, spectrophotometry, gas chromatography, specific ion electrolysis and x-ray diffraction.

Radiation Hazards in the Occupational Environment (591)

This course is designed to provide the trainee with the basic technical knowledge necessary for the protection of personnel from ionizing and nonionizing radiation hazards. Discussion will be centered on the various types of radiation sources and their occurrence in the industrial environs, evaluation of the potential hazards to personnel from exposure to such sources, and the methods available for control purposes. Laboratory practices and field trips are employed to both emphasize and enhance the concepts taught in lecture sessions.

Courses 581, 583, 584, 588, 589 and 590 will be scheduled on a demand basis — when sufficient applicants have responded or when a group request is received.

Any group or organization desiring to have a NIOSH course presented at a location of their choice is eligible for a group discount rate. Contact the Chief, Environmental Management Branch, (513) 684-3253 for further information.

U.S. Department of Health, Education, and Welfare
Public Health Service
Health Services and Mental Health Administration
National Institute for Occupational Safety and Health

HSM 73-11019