

ENVIRONMENTAL HEALTH SUPPORT CENTER TRAINING



**Office of Environmental Health and Engineering
Albuquerque Area Indian Health Service**

For additional information, contact the Environmental Health Support Center, 5300 Homestead Rd. NE, Albuquerque, NM, 87110, Telephone 505-248-4258, FAX 505-248-4265.

REGISTRATION INFORMATION

The pages that follow contain scheduled training offerings for Fiscal Year 2003 (October 2002 - September 2003) as well as a brief description of all Environmental Health Support Center (EHSC) training courses. Additional information is available by calling 505-248-4258 or through the Environmental Health Support Center Web site at:

<http://www.opheng.ihs.gov>

Request course registration as follows:

Contact your Area Training Coordinator: A listing of Training Coordinators for each Indian Health Service Area is provided on the following page. These individuals will provide registration assistance to both IHS, tribal and other governmental employees.

By the Internet: Nomination for Training may be requested through the EHSC web site as indicated above. Go to the EHSC training section and fill out the online registration request form. The request form will be routed to the appropriate Area Training Coordinator.

These requests will be consolidated with other training requests from the Area and submitted to EHSC.

EHSC does not provide for direct registration of students. All requests should be routed through the Training Coordinator for your respective Area, organizational unit or agency.

A registration confirmation and instructions for attendance at the course will be mailed to all approved training registrants approximately 45 days prior to the training.

IHS AREA EHSC TRAINING COORDINATORS

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ENVIRONMENTAL HEALTH PROGRAM MANAGEMENT

INTRODUCTION TO MANAGEMENT SKILLS: (10500)

The one-week introductory is designed to provide students with basic management skills such as: leadership, interpersonal effectiveness, problem solving, group dynamics, and time management. This is a highly interactive course that emphasizes understanding personality types and group interactions as essential skills for program managers. This is a prerequisite to the advanced course.

Who should attend: Program managers and supervisory personnel of all disciplines.

Course Length: 3 days

Continuing Education Units: Not available

Objectives:

- How to identify and understand work styles
- Learn to apply conflict management techniques
- Understanding your own management style
- Learn effective time management skills
- Understanding group dynamics

Date and Location: *Not offered in fiscal year 2003*

ADVANCED MANAGEMENT SKILLS: (10600)

The one-week advanced management course is designed to provide students with additional management skills. This course builds on concepts developed in the Introduction to Management Skills course, which is a prerequisite to registration in this course.

Who should attend: Program managers and supervisory personnel of all disciplines.

Course Length: 3 days

Continuing Education Units: Not available

Objectives: See objectives above. Training continues to build on the skills introduced in the introductory course.

Date and Location: *Not offered in fiscal year 2003*

T1-T3 WORKSHOP FOR SANITATION FACILITIES CONSTRUCTION: (11000)

This three-day seminar will analyze the new amendments to Public Law 93-638. The options available to tribes under the law for a Title I contract or a Title III compact are covered in depth with examples presented for both options and their respective impacts to the Sanitation Facilities Construction Program. The seminar is intended to provide a complete analysis of the tribal/federal relationship under these regulations. The course is designed for tribal and IHS personnel involved in 93-638 construction activities.

Who should attend: Program managers and supervisory personnel of all disciplines.

Course Length: 3 days

Continuing Education Units: Not available

Objectives:

- Understanding Public Law 93-638
- Understanding implications of 93-638 responsibility assumptions
- Understanding the negotiation process
- Identify the players
- Understanding the Sanitation Facilities Construction Program

Date and Location: *Not offered in fiscal year 2003*

ENVIRONMENTAL HEALTH ORIENTATION: (10000)

This is a five-day course designed for engineers and sanitarians that are relatively new to the Indian Health Service and the Office of Environmental Health and Engineering (OEHE) Program. The course covers program philosophy, policy, administration and scientific/technical material basic to the OEHE program.

Who should attend: IHS and Tribal personnel new or with limited experience working with the Office of Environmental Health and Engineering programs of the Indian Health Service.

Course Length: 5 days

Continuing Education Units: Not available

Objectives:

- Develop and overview of OEHE programs
- Meet national program managers and other OEHE personnel
- Develop networking relationships with peers from other IHS Areas
- Develop basic skills essential to OEHE program operations

Date and Location: *Not offered in fiscal year 2003*

MID-LEVEL MANAGEMENT: (18500)

This three-day course is intended for engineers and sanitarians at the district, assistant chief, or similar mid-management level. Elements of IHS organizational structure, policy, personnel, supervision and management techniques that will prove useful as these individuals move into higher-level positions within IHS are included. This training is conducted in or near the Rockville, Maryland Area. An orientation to the offices within IHS Headquarters in the Parklawn Building is included.

Who should attend: IHS and Tribal personnel five or more years of experience working with the Office of Environmental Health and Engineering programs of the Indian Health Service. This course is particularly targeted toward District level and above personnel who have supervisory and program oversight responsibility.

Course Length: 3 days

Continuing Education Units: Not available

Objectives:

- Review program guidelines with national program managers
- Develop working knowledge of Headquarters operation and personnel
- Understand IHS personnel regulations and supervisory requirements
- Develop advanced skills essential to OEHE program operations

Date and Location: *Not offered in fiscal year 2003*

SFC DATA SYSTEMS: (18600)

This course presented by the Sanitation Facilities Construction Branch, Headquarters provides an overview of the structure and operation of the Sanitation Tracking and Reporting System (STARS). This training is recommended for staff having responsibility for data entry and review of STARS information on behalf of their Area.

Who should attend: Sanitation Facilities Construction Program managers and data entry staff.

Course Length: 3 days

Continuing Education Units: Not available

Objectives:

- Review STARS data system function and structure
- Understand data entry requirements
- Provide feedback to national program managers on system needs
- Develop custom report generation skills

Date and Location: *March 11-13, 2003* *Nashville, TN*

GOVERNMENT CONTRACT LAW: (16200)

Presented by Georgetown University, this course discusses basic elements of government contract law using instructors with extensive legal backgrounds in government contracting. Practical examples are utilized throughout giving students a broad exposure to actual contract litigation.

Who should attend: Government contract managers and representative

Course Length: 4 days

Continuing Education Units: Not available

Objectives:

- Provide an overview of the government contract process
- Understanding bonds liens and insurance
- Develop skills for writing effective specifications
- Understanding changes and changed conditions
- Understanding sub-contracting requirements
- Understanding delay, suspension and acceleration requirements
- Review contracting representative responsibilities
- Understanding breaches and disputes

Date and Location: *Not offered in fiscal year 2003*

ENVIRONMENTAL LAW AND COMPLIANCE: (16100)

This course offers attendees a description and how to comply with their requirements of the major environmental laws. The curriculum is designed for those who are new to the environmental field, or who need a comprehensive review of the major laws and regulations. Topics include: Environmental Law System, Environmental Liabilities, Water Pollution Control, Air Pollution Control (Clean Air Act Compliance, RCRA/Hazardous Waste CERCLA/Superfund, EPCRA/SARA Title III, NEPA, TSCA/OSHA, Underground Storage Tanks, Management Strategies, Inspections/Audits.

Who should attend: IHS and Tribal personnel with environmental compliance responsibilities within their organizations

Course Length: 4 days

Continuing Education Units: Not available

Objectives:

- Increase your understanding of environmental regulations
- Understand how to plan effective compliance programs

- Practice environmental strategies in a classroom setting
- Understand your responsibilities and liabilities

Date and Location: *Not offered in fiscal year 2003*

INTRODUCTION TO ARCVIEW GIS: (16390)

This two-day course gives the hands-on experience and conceptual overview needed to take full advantage of ArcView's display, editing, analysis and presentation mapping functions. Class participants become familiar with the components of the ArcView GIS interface and learn how documents called views, tables, charts and layouts are used to display and work with different kinds of information.

Who should attend: IHS and Tribal personnel with environmental compliance responsibilities within their organizations

Course Length: 3 days

Continuing Education Units: Not available

Objectives:

- Display tabular and feature data
- Work with georeferenced spatial data
- Query features using logical expressions
- Associate table data to maps

Date and Location: *Not offered in fiscal year 2003*

CONSTRUCTION PROJECT MANAGEMENT: (17000)

This training provides exposure to private industry concepts used in defining a scope of work, establishing costs estimates & construction budgets, quality control, field communication & coordination, on-site control, labor & work in place, job cost & productivity reporting, freight coordination & tracking, resource allocation, material take offs, procurement, and construction scheduling. In addition, this course explores the relationship between IHS/Tribal governments and various contributing agencies.

Who should attend: IHS or Tribal engineers and project managers

Course Length: 3 days

Continuing Education Units: Not available

Objectives:

- Evaluate job cost accounting vs. regular
- Establish a work breakdown structure with codes
- Create work plans, estimates, schedules, and reports
- Evaluate projects, track, forecast, and plan

Date and Location: *July 15-17, 2003* *Albuquerque, NM*

NEPA: (16000)

A workshop to bring NEPA coordinators and project managers up to date on the latest NEPA rules and regulations. We will discuss the Agency’s methods for NEPA review and any exclusion that exist. A discussion is planned on NEPA coordination with other Agencies (EPA, USDA, HUD).

Who should attend: IHS or Tribal engineers and project managers

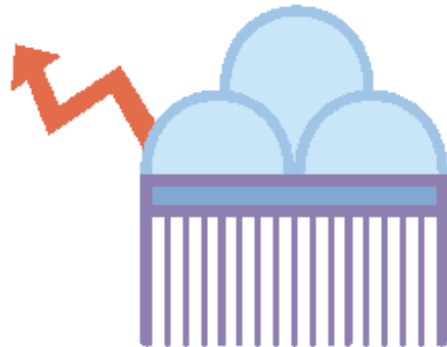
Course Length: 3 days

Continuing Education Units: Not available

Objectives:

- Manage the NEPA process to comply with the intent of the law
- Implement CEQ regulations and agency requirements
- Review and write EAs, FONSI, EISs, RODs, that comply with NEPA and agency guidelines

Date and Location: *Not offered in fiscal year 2003*



INJURY PREVENTION

INTRODUCTION TO INJURY PREVENTION: (11500)

This introductory course introduces participants to the core components of the public health approach to preventing injuries among American Indians and Alaska Natives. Throughout the course, participants will work in small teams to address specific injury issues in fictional communities based on actual Tribal communities throughout the country. The course will culminate in a mock Tribal Council activity, during which team members will present information about their assigned community and their ideas for addressing the injuries in that community.

Who should attend: tribal health board members, health directors, tribal council members, IHS environmental health personnel, and tribal injury prevention staff.

Course Length: 3 ½ days

Continuing Education Units: 1.8

Objectives:

Participants will gain introductory knowledge and skills related to:

- Interpreting injury data
- Identifying causes of injuries
- Working with injury coalitions to plan for the implementation, evaluation, marketing and advocacy of injury prevention programs

Date and Location:	<i>April 14-18, 2003</i>	<i>Fairbanks, AK</i>
	<i>June 23-27, 2003</i>	<i>San Diego, CA</i>

INTERMEDIATE INJURY PREVENTION: (12500)

This course builds upon the knowledge and skills addressed in the Introduction to Injury Prevention by delving into the ways in which what is known about injuries and prevention strategies can be used in the public health approach to preventing injuries among American Indians and Alaska Natives. Following a review of the basics of data interpretation, coalition building, program planning, evaluation, marketing and advocacy, participants will gain detailed understanding and skills within several topic areas. These include complex causes of injuries, such as the influence of alcohol on injuries, techniques for maintaining coalitions through challenging circumstances, web-based data identification tools, basic data collection techniques, process and impact evaluation methods, and basic PowerPoint skills. The course will include multiple hands-on community- and computer-based activities. Introduction to Injury Prevention is a prerequisite for this course.

Who should attend: tribal health board members, health directors, tribal council members, IHS environmental health personnel, and tribal injury prevention staff.

Course Length: 3 ½ days

Continuing Education Units: 1.8

Objectives:

- Learn how alcohol influences injuries
- How to maintain a coalition
- Become familiar with web-based data identification tools
- Become familiar with basic data collection techniques
- Learn process and impact evaluation methods

Date and Location: *November 4-8, 2002* *Albuquerque, NM*

ADVANCED INJURY PREVENTION: (12800)

This course builds upon the knowledge and skills addressed in the introductory and intermediate courses in this series by focusing on the ways in which data, coalitions, program planning, evaluation, marketing and advocacy can be integrated in a well-managed program to prevent injuries among American Indians and Alaska Natives. Topic areas to be addressed during this course include financing injury prevention programs; collaborating with the media; developing injury prevention reports and presentations; conducting formative and outcome evaluation; analyzing and interpreting data; developing short- and long-term strategic plans; and ensuring institutionalization of injury prevention projects in the community. The course will include hands-on skill-building activities designed to be transportable to participant home communities. Prerequisite: Introduction to Injury Prevention.

Who should attend: tribal health board members, health directors, tribal council members, IHS environmental health personnel, and tribal injury prevention staff.

Course Length: 3 ½ days

Continuing Education Units: 1.8

Objectives:

- Developing an Injury Prevention Program budget
- Collaborating with the various media outlets to promote an Injury Prevention Program
- Develop injury prevention reports and presentations
- Developing short- and long-term strategic plans

Date and Location: *April 14-18, 2003* *Oklahoma City, OK*

ISSUES IN INJURY CONTROL: (60000)

An Injury Prevention Epidemiology Fellowship Course

This is the first of the required core courses of the Injury Prevention Specialist Epidemiology Fellowship. It provides an introduction to conducting injury prevention research projects. Special emphasis is placed on hypothesis formation, choosing the correct study design, data collection, ethical considerations, and how to conduct literature reviews.

Who should attend: current members of the Injury Prevention Epidemiology Fellowship.

Course Length: 4 days

Continuing Education Units: Not available

Objectives:

- Finalize Fellowship project outline
- Conduct preliminary literature review

Date and Location: *Not offered in fiscal year 2003*

INJURY PREVENTION EPIDEMIOLOGY FELLOWSHIP SUMMER SESSION: (60100)

An Injury Prevention Epidemiology Fellowship Course

The summer session focuses on epidemiology of injuries. Fellowship participants complete three required and up to three optional graduate level courses in a formal university setting. As part of the required courses, the participants will complete a literature review or study design for their respective research projects.

Who should attend: current members of the Injury Prevention Epidemiology Fellowship.

Course Length: 3 weeks

Continuing Education Units: Not available

Objectives:

- Finalize project proposal
- Consult academic instructors regarding project
- Conduct additional literature review

Date and Location: *Not offered in fiscal year 2003*

INJURY PREVENTION FIELD RESEARCH: (60200)

An Injury Prevention Epidemiology Fellowship Course

This course is conducted through a series of field trips and workgroup exercises in different IHS Areas. Based on an identified local injury problem, student workgroups address different components of the steps toward a successful injury-prevention action plan. Intervention strategies are developed based on actual injury case histories.

Who should attend: current members of the Injury Prevention Epidemiology Fellowship.

Course Length: 5 days

Continuing Education Units: Not available

Objectives:

- Fellows will have the opportunity to work on a local injury problem with host IHS or Tribal staff
- Opportunities to work on various activities such as data collection, home inspections, focus groups and intervention planning will be available

Date and Location: *Not offered in fiscal year 2003*

PRESENTATION AND PUBLICATION OF IP PROJECTS: (60300)

An Injury Prevention Epidemiology Fellowship Course

This is an Injury Prevention Fellowship course providing current fellows with expert guidance in the analysis and interpretation of research results. The course addresses the skills necessary to prepare a special study in a publishable format and present the findings to a professional audience.

Who should attend: Members of the current Injury Prevention Epidemiology Fellowship Program.

Course Length: 3 days

Continuing Education Units: Not available

Objectives:

- Finalize a professional research paper and presentation based upon current Fellowship project
- Improve presentation techniques

Date and Location: *January 28-30, 2003* *Albuquerque, NM*

INJURY PREVENTION EPIDEMIOLOGY FELLOWSHIP SYMPOSIUM: (60400)

An Injury Prevention Epidemiology Fellowship Course

Current Injury Prevention Specialist Epidemiology Fellows present their special projects before IHS Headquarters, Area Staff and Tribal leaders.

Who should attend: tribal health board members, health directors, tribal council members, IHS environmental health personnel, and tribal injury prevention staff.

Course Length: 1 day

Continuing Education Units: Not available

Objectives:

- Injury Prevention personnel will have the opportunity to see the current Epidemiology Fellowship class present the findings of their yearlong project.

Date and Location: *May 23, 2003* *Seattle, WA*

INJURY PREVENTION SPECIALIST FELLOWSHIP COLLOQUIUM: (60500)

An Injury Prevention Fellowship Course

Injury Prevention Specialist Fellowship graduates are invited to attend a continuing education colloquium that is offered approximately every 18 months. This program is designed to keep injury prevention practitioners current on practices in injury prevention.

Who should attend: tribal health board members, health directors, tribal council members, IHS environmental health personnel, and tribal injury prevention staff.

Course Length: 1 day

Continuing Education Units: Not available

Objectives:

- Injury Prevention personnel will have the opportunity to hear presentations given by various Injury Prevention professionals.
- The current focus of the IHS Injury Prevention Program will also be discussed to provide field staff an opportunity to be updated on the most current practices within the program.

Date and Location: *Not offered in fiscal year 2003*

INJURY PREVENTION PROGRAM PLANNING: (60600)

New

Injury Prevention Program Development Fellowship Course

This is the first of the required core courses of the Injury Prevention Specialist Program Development Fellowship. The focus of this course is on program design, project objectives and timelines, and on effective strategies for the prevention of injuries in American Indian and Alaska Native communities. Fellows will attend case study presentations describing Injury Prevention Programs in American Indian and Alaska Native communities.

Who should attend: current members of the Injury Prevention Program Development Fellowship Class.

Course Length: 4 days

Continuing Education Units: Not available

Objectives:

- Finalize Fellowship project outline
- Conduct preliminary literature review

Date and Location: *May 19-23, 2003* *Seattle, WA*

New

PROGRAM DEVELOPMENT FELLOWSHIP ACADEMIC SESSION: (60700)

An Injury Prevention Program Development Fellowship Course

The focus of this course will be on coalition building, action planning and program management. Fellows will be instructed how to use evaluation in project development, while participating in course components with their mentors. Fellows will also attend guest lectures given by injury prevention experts. On-campus libraries will be available for additional literature review, and Fellows will have access to local computer labs as well.

Who should attend: current members of the Injury Prevention Program Development Fellowship Class.

Course Length: 5 days

Continuing Education Units: Not available

Objectives:

- Finalize project proposal
- Complete a draft outline of program, evaluation or marketing plan

Date and Location: *August 11-15, 2003* *TBD*

PROGRAM DEVELOPMENT FELLOWSHIP FIELD COURSE: (60800)

An Injury Prevention Program Development Fellowship Course

During this course, Fellows will have the opportunity to choose from a menu of hands-on, field-based learning activities sponsored by local Tribes and/or Service Units. These sessions will be facilitated by Tribal Staff or other Fellowship instructors and will build skills directly applicable to Fellows' projects.

Who should attend: current members of the Injury Prevention Program Development Fellowship Class.

Course Length: 5 days

Continuing Education Units: Not available

Objectives:

- The Fellows will have the opportunity to obtain specialized project skills
- Conduct various data collection exercises
- Develop/design program materials (newsletters, press releases, etc.)
- Develop coalition meeting materials
- Develop budget plans and justifications

Date and Location: *Not offered in fiscal year 2003*

PROGRAM DEVELOPMENT FELLOWSHIP MARKETING AND ADVOCACY: (60900)

An Injury Prevention Program Development Fellowship Course

This course is designed to offer current Fellows an opportunity to develop their presentation and public speaking skills, as well as their report writing skills. Fellows will have the opportunity to identify financial resources and develop program budgets and grant proposals.

Who should attend: current members of the Injury Prevention Program Development Fellowship Class.

Course Length: 5 days

Continuing Education Units: Not available

Objectives:

- The Fellows will have the opportunity to develop their presentation skills

- Improve report writing
- Conduct a grant writing exercise
- Develop budget plans and justifications

Date and Location: *Not offered in fiscal year 2003*

**INJURY PREVENTION PROGRAM DEVELOPMENT FELLOWSHIP SYMPOSIUM:
(61000)**

An Injury Prevention Program Development Fellowship Course

Current Injury Prevention Specialist Program Development Fellows present their special projects before IHS Headquarters, Area Staff and Tribal leaders.

Who should attend: tribal health board members, health directors, tribal council members, IHS environmental health personnel, and tribal injury prevention staff.

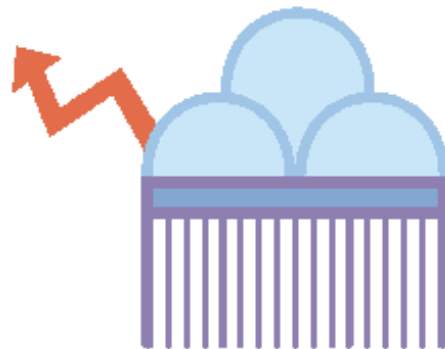
Course Length: 1 day

Continuing Education Units: Not available

Objectives:

- Injury Prevention personnel will have the opportunity to see the current Program Development Fellowship class present the findings of their yearlong project.

Date and Location: *Not offered in fiscal year 2003*



ENVIRONMENTAL HEALTH SERVICES

BASIC ENVIRONMENTAL HEALTH PRACTICES: (23500)

This is an entry-level course designed to develop and enhance practical environmental health program skills to tribal and IHS environmental health specialists and technicians. The focus of this course is to present skills and best practices in the basic components of a comprehensive environmental health program. Course topics include: surveillance, investigation, interpretation and control procedures for a variety of environmental concerns including water, solid waste, sewage, food service, vectors, institutional health, injuries, and hazardous materials.

Who should attend: IHS and Tribal environmental health personnel.

Course Length: 5 day

Continuing Education Units: Not available

Objectives:

- Learn the basic skills and best practices for a comprehensive environmental health program
- Perform various environmental health-related hands-on activities

Date and Location: *Not offered in fiscal year 2003*

INTRODUCTION TO EPI INFO: (13000)

This three-day introductory course is designed for those in environmental health or related fields that are involved in data gathering and analysis activities for injury prevention, safety, disease, or other surveillance programs. The course uses sample data sets to cover commonly used programs and commands in Epi Info epidemiological software.

Who should attend: tribal health board members, health directors, tribal council members, IHS environmental health personnel, and tribal injury prevention staff.

Course Length: 3 ½ days

Continuing Education Units: Not available

Objectives:

- Learn to utilize the Epi Info Computer Program as a data management tool
- Utilize Epi Info to conduct basic analysis on injury and illness data

Date and Location: *January 14-16, 2003* *Window Rock, AZ*

APPLICATION OF GIS IN ENVIRONMENTAL INVESTIGATIONS: (17100)

This three-day course will provide a short orientation to the concepts of Geographic Information Systems (GIS) and review ArcView GIS software as a problem-solving tool. ArcView will be used to identify and analyze a typical environmental health problem, using sample data sets. There will be a brief discussion and demonstration of other spatial analysis tools that, in conjunction with a GIS, can enhance problem-solving capabilities.

Who should attend: tribal health board members, health directors, tribal council members, IHS environmental health personnel, and tribal injury prevention staff.

Course Length: 3 days

Continuing Education Units: 1.8

Objectives:

- Learn the basics of GIS software
- Learn how GIS software can be applied to various public health situations

Date and Location: *Not offered in fiscal year 2003*

ENVIRONMENTAL TOXICOLOGY & IT'S APPLICATION TO HEALTHCARE: (23100)

The purpose of this environmental toxicology course is to provide an in-depth discussion of basic industrial hygiene subjects that are applicable to healthcare and the Indian Health Service. This three-day course will cover biological, chemical and physical hazards, with the primary focus on chemical hazards. Types of hazards will be identified along with methods of sampling, evaluation and control. At the conclusion of the course, time will be spent on the application of environmental toxicology to healthcare and how to incorporate this information into a comprehensive health and safety program.

Who should attend: IHS and tribal environmental health personnel, and hospital safety officers.

Course Length: 3 days

Continuing Education Units: 1.8

Objectives:

- Discuss biological, chemical and physical hazards
- Identify sampling, evaluation and control methods
- Discuss toxicological issues related to the healthcare setting

Date and Location: *Not offered in fiscal year 2003*

PLAN REVIEW FOR HEAD STARTS: (25500)

This three-day course will provide practical information and strategies to those tasked with reviewing construction plans for educational occupancies, specifically Head Starts. This course is targeted to those responsible for providing the technical expertise to the Head Start Health Advisor who must review and approve all plans for proposed construction, as required by the most recent AIPB, Head Start Environmental Health Standard.

Who should attend: IHS and tribal environmental health personnel, as well as head start and/or day care center personnel.

Course Length: 3 days

Continuing Education Units: Not available

Objectives:

- Discuss AIPB standards as they apply to construction plan reviews
- Discuss the importance of conducting thorough plan reviews throughout various phases of construction

Date and Location: *Not offered in fiscal year 2003*

PLAYGROUND SAFETY INSPECTION CERTIFICATION: (25600)

This two-day course provides in-depth instruction on playground hazard identification and risk management. Advanced reading and ten hours of training from nationally known playground safety experts will prepare the students to sit for the Certified Playground Safety Inspector examination offered at the end of the certification course.

Who should attend: IHS and tribal environmental health personnel, as well as head start and/or day care center personnel.

Course Length: 2 days

Continuing Education Units: Playground Safety Inspector Certification

Objectives:

- Discuss current standards used to conduct comprehensive environmental health and safety surveys of playgrounds

Date and Location: *Not offered in fiscal year 2003*

FDA FOOD CODE TRAIN THE TRAINER: (26000)

This 4-day course is expected to allow the students become familiar with the most current edition of the Food and Drug Administration Food Code. It is also, expected that students completing the course will return to their Areas and train local/tribal sanitarians and inspectors, and retail establishments as appropriate, in the requirements of the Food Code. Trainers will receive a CD-ROM containing Food Code training materials and PowerPoint slides.

Who should attend: IHS and tribal environmental health personnel.

Course Length: 4 days

Continuing Education Units: 2.8

Objectives:

- Discuss the most current edition of the FDA Food Code, including any changes that may have been made since the last published code
- Students should be able to use the material presented in this course to train co-workers and the staff at the various retail or institutional establishments they survey

Date and Location: *Not offered in fiscal year 2003*

HAZARDOUS WASTE OPERATIONS & EMERGENCY RESPONSE: (14100)

This 40-hour HAZWOPER course is designed to discuss OSHA's 29 CFR 1910.120 standard. Workers exposed to hazardous substances are required to attend 40 hours of safety training. This course examines the proper health and safety procedures and personnel protection during work operations at hazardous waste sites.

Who should attend: environmental health specialists, tribal emergency response personnel, facilities and maintenance staff, and tribal utility operators.

Course Length: 4 ½ days

Continuing Education Units: 40-Hour HAZWOPER Certification

Objectives:

- Understanding hazard identification and control
- Understanding safety planning, site control, and personal protective equipment
- Understanding site monitoring, emergency and incident response and decontamination.

Date and Location: *December 9-13, 2002* *Phoenix, AZ*

ENVIRONMENTAL HEALTH SERVICES DATA SYSTEMS: (28000)

This course is presented by the Division of Environmental Health Services providing an overview of the most current methods for maintaining a local Facility Data System (FDS), and updating the national FDS on a regular basis, as well as the recommended methods for calculating RRM and tribal shares.

Who should attend: environmental health specialists and tribal sanitarians currently using any of the various EHS data systems.

Course Length: 3 days.

Continuing Education Units: Not available

Objectives:

- Understanding current EHS data systems
- Understanding RRM calculations
- Understanding the calculation of tribal shares
- Understanding the development of Area EHS financial disbursements

Date and Location: *Not offered in fiscal year 2003*

INTRODUCTION TO EPIDEMIOLOGY: (23100)

This introductory course will highlight the practical applications of the principles of epidemiology and how they relate to the investigation of public health problems. It will be focused on the environmental health specialist, safety officer or infection control officer whose responsibilities include epidemiological investigations in either the community or healthcare setting. Topics include: field investigations, public health surveillance, methods of control and prevention, and evaluation. Selected diseases will be discussed to emphasize the application of epidemiological principles to infectious and non-infectious diseases.

Who should attend: IHS and tribal environmental health and injury prevention personnel, and hospital safety and infection control officers.

Course length: 2 ½ days

Continuing Education Units: 2.0

Objectives:

- Identify the steps necessary to complete epidemiological investigations
- Identify the Ten steps of epidemiology
- Learn basic skills necessary to utilize the Epi Info analytical software program
- Successfully complete a mock field investigation

Date and Location: *December 9-11, 2002 Anchorage, AK*

CERTIFIED POOL/SPA OPERATOR'S COURSE: (25800)

In this two-day course, the students will receive instruction by a Certified Instructor specifically trained to communicate the basic skills necessary to operate a pool or spa facility. The course covers pool and spa chemistry, testing, treatment, filtration, maintenance, automatic feeding equipment and government requirements. The CPO examination is offered at the conclusion of the course. This certification is for a minimum of 5 years at which time a refresher course and/or an examination must be passed.

Who should attend: IHS and tribal environmental health personnel responsible for conducting surveys of swimming pools or spas.

Course length: 2 days

Continuing Education Units: Not available

Objectives:

Students will gain a better understanding of:

- Disinfection, pH and stabilizer levels
- Safety signs and equipment
- Requirement of operational records
- Lifeguard requirements
- Clarity, bacteriological and chemical quality of pool water
- General requirements for maintaining pools clean, sanitary and in good repair
- Skimmers and their proper operation and maintenance
- Required turnover rates
- Replacement of equipment
- Backflow protection
- Lighting
- Depth marker requirements
- Pressure gauges
- Flow meters
- Maximum water temperatures

Date and Location: *November 20-21, 2002* *Orlando, FL*

BASIC PLAN REVIEW: (25700)

This two-day course will provide practical information and strategies to those tasked with reviewing construction plans. Topics covered include: drawing conventions, sections, details, construction, fire rated assemblies, exit enclosures, fire rated doors, occupant loads and egress capacity. Also, travel distance, dead ends, common paths of travel, vertical openings hazardous areas, interior finishes, draperies and curtains, and fire alarm and detection. As well as sprinklers,

fire extinguishers & other fire protection systems. Each student will receive a copy of the most recent version of the *NFPA Life Safety Code*.

Who should attend: environmental health specialists and tribal sanitarians that conduct plan reviews or comprehensive Life Safety surveys.

Course Length: 2 days

Continuing Education Units: N/A

Objectives:

- Develop a basic understanding of the latest *NFPA Life Safety Code*
- Apply basic principles of the *NFPA Life Safety Code* while conducting plan reviews
-

Date and Location: *Not offered in fiscal year 2003*

New

INTRODUCTION TO WEBEHRS: (28100)

This course is designed to provide training on how to effectively use the Web based Environmental Health Reporting System (WebEHRS) for documenting activities as well as planning and prioritizing work. In the course, students will learn how to add and edit facility information, add survey information, upload documents into the system for reference, add e-survey data into the system and perform basic Geographic Information System (GIS) functions. This will be a hands-on course and each student should at least have basic computer skills.

Who should attend: IHS and tribal environmental health personnel

Course length: There will be two courses each lasting 1½ days

Continuing Education Units: 1.1

Objectives:

- Students will use the WebEHRS computer program to plan and prioritize activities
- Students will be able to update, change or modify facility information
- Students will be able to update, change or modify survey information
- Students will be able to perform basic GIS functions

Date and Location: *January 21-23, 2003* *Albuquerque, NM*

New

SANITARY SURVEY COURSE: (29000)

This course is designed to develop the capabilities of individuals to conduct an effective and comprehensive review of public water systems. The training teaches inspectors to apply basic scientific information and a working knowledge of the operation, maintenance, management, and technology of a water system to identify sanitary risks that may interrupt the multiple barriers of protection at a water system.

Who should attend: field staff responsible for inspecting and evaluating small water systems for sanitary risks and compliance with the Safe Drinking Water Act.

Course length: 3 days

Continuing Education Units: 1.8

Objectives:

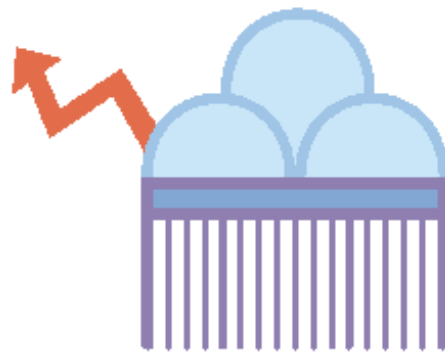
The training addresses the eight essential elements of a sanitary survey as defined by the EPA/State Joint Guidance on Sanitary Surveys and the interim enhanced surface water treatment rule:

- Water source, Treatment, and Distribution system
- Finished water storage
- Pumps and pump facilities and controls
- Monitoring, Reporting and data verification
- Water system management and operations
- Operator compliance with State and Federal requirements

Date and Location:

July 29-31, 2003

Reno, NV



INSTITUTIONAL ENVIRONMENTAL HEALTH

INTRODUCTION TO INSTITUTIONAL ENVIRONMENTAL HEALTH: (20010)

Introduction designed to enhance skills and increase knowledge for addressing institutional environmental health concerns is provided in this course. Topical lessons include, the institutional environment (medical, childcare and correctional facilities), infection control, safety management, industrial hygiene, medical waste management, and survey concerns.

Who should attend: Entry-level IHS and tribal environmental health personnel.

Course length: 4½ days

Continuing Education Units: 3.0

Objectives:

- Students will become familiar with the Institutional Environmental Health Program within the IHS
- Students will be provided information to enhance their knowledge and skills for addressing institutional environmental health issues within their areas
- Students will participate in hands-on activities to become more familiar with various equipment that might be used in future institutional environmental health activities

Date and Location: *Not offered in fiscal year 2003*

BASIC COURSE FOR SAFETY OFFICERS: (26100)

This four and one-half day introductory course is designed for new safety officers primarily in health facilities. Through a series of lectures and hands-on exercises, students will learn the required components of a comprehensive healthcare Occupational Safety and Health program described in Chapter 9 of the Indian Health Manual. Participants attending the full course will also receive OSHA certification as “successfully completing an Occupational Safety and Health Training Course in General Industry Safety and Health”.

Who should attend: Full time or collateral duty Safety Officers in the ambulatory care or hospital setting. Quality Mangers may also benefit from this course.

Course Length: 4½ days

Continuing Education Units: 3.0

Objectives:

- Obtain 10-Hour OSHA Certification

- Learn all basic aspects of a comprehensive healthcare occupational safety and health program
- Become familiar with the requirements of regulatory and accreditation bodies such as OSHA, JCAHO, and the National Fire Protection Association (NFPA)
- Become familiar with Chapter 9, *Managing Occupational Safety and Health Programs*, of the Indian Health Manual
- Become familiar with industrial hygiene regulations, survey methodologies, and personal protective equipment selection and fit testing

Date and Location: *February 10-14, 2003* *Oklahoma City, OK*

OSHA 600 COLLATERAL DUTY COURSE FOR SAFETY OFFICERS: (26200)

This course introduces federal agency collateral duty (part-time) safety and health personnel to the OSH Act, Executive Order 12196, 29 CFR 1960, and 29 CFR 1910. It enables them to recognize basic safety and health hazards in their own workplaces and to effectively assist agency safety and health officers in their inspection and abatement efforts. The course highlight is a mock inspection of a government facility to provide hands-on experience. Prerequisite is Basic Course for Safety Officers.

Who should attend: Full time or collateral duty Safety Officers in the ambulatory care or hospital setting. Quality Mangers may also benefit from this course.

Course Length: 4 days.

Continuing Education Units: 2.2

Objectives:

- Describe the OSH Act, 29 CFR 1960, and 29 CFR 1910
- Describe the major provisions of Executive Order 12196
- Identify selected safety and health hazards and OSHA standards
- Describe abatement methods for selected safety and health hazards
- Explain and apply workplace inspection procedures consistent with established OSHA policies, procedures, and directives

Date and Location: *Not offered in fiscal year 2003*

BASIC COURSE FOR INFECTION CONTROL PRACTITIONERS: (23600)

In this 3-day introductory course designed for new infection control practitioners in small hospitals and ambulatory care settings, obtain an overview of basic infection control measures, epidemiology principles, concepts, and procedures generally used in the surveillance and investigation of nosocomial infections and employee health issues. The essential features and applications of descriptive and analytic epidemiology, public health surveillance, and a step-by-

step description of outbreak investigations are presented. Learn how to calculate and interpret frequency measures (ratios, proportions and rates) and how to use tables, graphs, and charts to organize, summarize, and display data.

Who should attend: Full time or collateral duty Infection Control Officers in the ambulatory care or small hospital setting.

Course Length: 3 days

Continuing Education Units: 2.5

Objectives:

- Learn all basic aspects of a comprehensive healthcare infection control program
- Become familiar with OSHA infection control requirements including the Bloodborne Pathogens Standard and the Needlestick Safety and Prevention Act
- Become familiar with isolation techniques including standard precautions, universal precautions, body substance isolation, and transmission-based precautions
- Become familiar with the collection, aggregation, and analysis of data including rate calculations
- Become familiar with the theory and practice of disinfection, sterilization, decontamination, and antisepsis
- Become familiar with the infection control requirements of regulatory bodies such as JCAHO, AAAHC, and CMS (formerly known as HCFA)
- Learn the basics of infection control surveillance and disease outbreak epidemiology
- Learn the details of an effective Tuberculosis Control Plan

Date and Location: *July 29-31, 2003* *Oklahoma City, OK*

OSHA 10-HOUR COURSE AND ITS APPLICATION TO HEALTHCARE: (27000)

The purpose of this OSHA 10-Hour Course is to provide an in-depth discussion on the issues that OSHA feels are important to providing a safe environment and the tools required to complete a Safety and Health Program. This course is geared to healthcare and will focus on areas that are unique to that setting. Course participants will complete the OSHA 10-Hour Course for General Industry with a heavy emphasis being devoted to areas that directly affect healthcare workers. In addition, they will learn how to design and implement a comprehensive healthcare safety and health program. Each participant will receive a current edition of the Occupational Safety and Health Standards for General Industry, an OSHA course completion card and a certificate of completion suitable for framing.

Who should attend: Full time or collateral duty Safety Officers in the ambulatory care or hospital setting.

Course Length: 3 days

Continuing Education Units: not available

Objectives:

- Learn all basic aspects of a comprehensive occupational safety and health program
- Become familiar with OSHA requirements specific to the healthcare industry including the Bloodborne Pathogens Standard and the Needlestick Safety and Prevention Act
- Earn the 10-Hour OSHA certification

Date and Location: *April 8-10, 2003* *Nashville, TN*
 June 10-12, 2003 *San Diego, CA*

ADVANCED COURSE FOR SAFETY OFFICERS: (26200)

This 4½-day course is designed to build on and enhance the knowledge base from the Basic Safety Officer Course. The course is held in a location that allows extensive “in facility” experience in applying the concepts and techniques learned during the course. Morning sessions are held in the classroom setting with afternoon sessions spent in the hospital applying knowledge gained from lectures.

Prerequisite: Basic Course for Safety Officers or extensive training and experience in managing an occupational safety and health program in the healthcare setting.

Topics include: Accident investigation, hazard surveillance, respiratory protection, hearing conservation, indoor air quality, ventilation, risk assessment & priority setting, industrial hygiene sampling and survey methodology, mercury, ergonomics, PPE selection and evaluation, hazard communication, NFPA, program assessment, emergency decontamination, and HAZWOPER issues.

Who should attend: Full time or collateral duty Safety Officers in the ambulatory care or hospital setting.

Course Length: 4½ days

Continuing Education Units: not available

Objectives:

- Learn all aspects of a comprehensive occupational safety and health program
- Become familiar with OSHA requirements specific to the healthcare industry including the Bloodborne Pathogens Standard and the Needlestick Safety and Prevention Act
- Apply skills and knowledge gained from classroom lectures
- Obtain the skills and knowledge required to train other Safety Officers at the students’ duty station

Date and Location: *March 3-7, 2003* *Phoenix, AZ*

IHS ERGONOMICS: OPTIMIZING OUR EMPLOYEES' WORKSTATIONS: (27100)

This course provides a practical approach to Ergonomics: “Fitting the Task to the Worker” in the IHS setting. The students will explore successful interventions; learn to employ tools that will enable them to implement relatively simple and inexpensive interventions to prevent the occurrence of musculoskeletal disorders caused by poor ergonomic practices.

Who should attend: Full time or collateral duty Safety Officers in the ambulatory care or hospital setting, as well as IHS and tribal environmental health professionals.

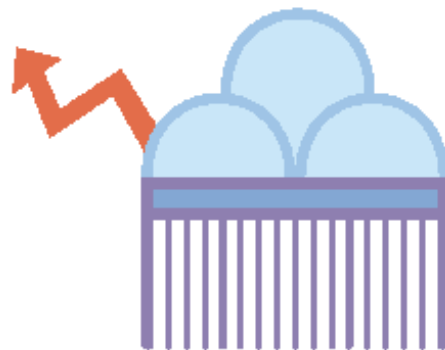
Course Length: 3 days

Continuing Education Units: 1.8

Objectives:

- Students will become familiar with ergonomics principles and their application in the design of work, equipment and the workplace
- Consideration is given to musculoskeletal disorders, manual handling, and ergonomics aspects of the environment as well as social and legal aspects
- Students should be able to apply ergonomics principles to the creation of safer, healthier and more efficient and effective activities in the workplace.

Date and Location: *Not offered in fiscal year 2003*



EMERGENCY RESPONSE

EMERGENCY RESPONSE ORIENTATION: (14500)

This two-day workshop is intended for personnel who have not previously participated in a disaster response effort under the Division of Environmental Health and Engineering (DFEE) Disaster Response Plan. Elements of the DFEE response plan and typical response efforts will be discussed. Additional topics will include field operations during a response, equipment needs and utilization, priority setting, interagency coordination, and public relations. The workshop is intended to prepare volunteers for immediate disaster response duty without the need for extensive orientation at the time of deployment, thereby increasing the readiness level of OEH&E responders.

Who should attend: Any Environmental Health professional who is interested in volunteering to respond to a natural disaster or emergency.

Course Length: 2 days

Continuing Education Units: not available

Objectives:

- To familiarize students of activities individuals are confronted with during a deployment to an emergency
- Learn the working plan and protocols outlined in the Environmental Health Disaster Response Plan
- Become familiar with the equipment provided during a deployment

Date and Location: *Not offered in fiscal year 2003*

EMERGENCY RESPONSE - ADVANCED: (14600)

This three-day workshop is intended for personnel who have previously participated in a deployment under the Division of Environmental Health and Engineering (DFEE) Disaster Response Plan. Previous experience qualifies individuals for Emergency Response Coordinator positions. The workshop is intended for volunteers who will be assuming leadership responsibilities during a deployment. Students gain valuable insight into response efforts through mock disaster exercises.

Who should attend: Any Environmental Health professional who has been deployed to at least one disaster response activity and who wants to assume increased roles and responsibilities during future deployments.

Course Length: 3 days

Continuing Education Units: not available

Objectives:

- To become intimately familiar with the Environmental Health Disaster Response Plan
- Learn the roles and responsibilities of the Environment Health Commander (EHCO)
- Qualify as an EHCO for future deployments

Date and Location: *Not offered in fiscal year 2003*

ENGINEERING AND CONSTRUCTION

CONSTRUCTION INSPECTION: (34100)

This course examines the appropriate role of the inspector in utility construction activities typical to IHS and tribal sanitation programs. This course enhances the technical skills of construction inspectors through the examination of construction activities, such as, pipelines, pump houses, and wells. The course emphasizes elements of record keeping, quality assurance, timeliness, and OSHA safety and liability.

Who should attend: Project managers, construction inspectors, and engineering technicians working with Tribal or Indian Health Service projects.

Course Length: 4 days

Continuing Education Units: 2.4

Objectives:

- Understand role of inspector in Federal construction contracts
- Provide awareness to OSHA construction safety standards
- Examine techniques for proper inspection

Date and Location: *March 4-7, 2003* *Albuquerque, NM*

LANDFILL CLOSURE & TRANSFER STATION DESIGN: (13600)

This training is designed to provide tribal and IHS personnel with the knowledge and skills to prepare a closure plan for small landfills, which will meet the requirements of current federal regulations. In addition, students will examine various design options and requirements for transfer stations and remote collection sites typically constructed as part of a rural solid waste system.

Who should attend: Enrollment is open to tribal O&M staff, tribal environmental health personnel, and IHS engineers and sanitarians.

Course Length: 3 days

Continuing Education Units: 1.8

Objectives:

- Understand RCRA requirements for small solid waste sites
- Evaluate options for small solid waste sites
- Understand the basics of transfer station design

Date and Location: *Not offered in fiscal year 2003*

MICROSOFT PROJECT: (36500)

This course provides an introduction to Microsoft Project, a computer based project management system. Topics covered will include time management, customization of GANTT and PERT charts, tracking and reports. Students will also learn how to make and utilize macros, combine and consolidate projects and to create custom forms and reports. Examples from IHS construction activities will be utilized.

Who should attend: IHS or Tribal engineers and project managers

Course Length: 3 days

Continuing Education Units: 1.8

Objectives:

- Understand work flow and project management
- Evaluate options for small project management
- Understand the basics Microsoft Project

Date and Location: *Not offered in fiscal year 2003*

PUMPS AND CONTROLS FOR ENGINEERS: (30000)

This 1-week course is divided into two separate topics: pumps and electrical controls. The pump portion covers hydraulics of pumped systems, pump drives, pump types, pump selection and specifications, and pump performance data. The electrical controls portion covers basics of motor controls, electrical safety, electric motors, troubleshooting, and designing motor controls.

Who should attend: IHS or Tribal engineers and project managers

Course Length: 5 days

Continuing Education Units: 4.0

Objectives:

- Learn to analyze a water system graphically
- Evaluate pump selection and drivers
- Understand basic electrical control design
- Build working electric control panels

Date and Location: *Not offered in fiscal year 2003*

BASIC SURVEYING COURSE: (31500)

This course is designed to teach basic surveying principles and skills needed by IHS engineers and construction personnel. The course includes classroom instruction combined with field application of land surveying techniques. Lessons include leveling, traversing, transit-stadia surveying and grade staking.

Who should attend: IHS or Tribal technicians, inspectors, and project managers

Course Length: 5 days

Continuing Education Units: 4.0

Objectives:

- Learn the basics of land descriptions
- Perform level loops, stadia surveys, and traverses
- Perform construction staking for utility lines and earthwork construction

Date and Location: *September 15-19, 2003* *Albuquerque, NM*

ELECTRONIC SURVEYING/COMPUTER DESIGN: (32001)

A course designed to teach the use of electronic survey instruments and data collectors, and the interfacing of survey data with computer aided design and drafting.

Who should attend: IHS or Tribal technicians, inspectors, and project managers

Course Length: 5 days

Continuing Education Units: 4.0

Objectives:

- Learn to use electronic surveying equipment and data collectors
- Perform field surveys for topography and design
- Perform stake out surveys from a CAD design

Date and Location: *September 22-26, 2003* *Albuquerque, NM*

INTRODUCTION TO GPS SURVEYING: (36000)

An introductory course into various field-surveying techniques, which utilize survey grade Global Positioning System technology. Students learn "fast static" and "real time kinematics (RTK)" surveying techniques to collect field data that is used for engineering design of water and

wastewater systems. Sessions also include post processing of data, transformation of coordinate data to preferred reference systems, and stakeout routines for construction staking.

Who should attend: IHS or Tribal technicians, inspectors, and project managers

Course Length: 5 days

Continuing Education Units: 4.0

Objectives:

- Provide basic instruction on geodetic surveying
- Perform basic surveys using multiple receivers and data collectors
- Perform kinematic surveys to collect field data and to do stake-outs

Date and Location: *March 24-28, 2003* *Gallup, NM*
 March 31 – April 4, 2003 *Albuquerque, NM*

ADVANCED GPS SURVEYING: (38200)

A course that examines advanced GPS surveying techniques. The course centers on the use of Trimble’s Geometrics Office software and post processing data. The course examines the use of CORS stations, coordinate systems, and other data sources.

Who should attend: IHS or Tribal engineers and project managers

Course Length: 5 days

Continuing Education Units: 4.0

Objectives:

- Provide advanced instruction on geodetic surveying
- Perform baseline static surveys using multiple receivers and data collectors
- Perform kinematic surveys to collect field data and to do stake-outs
- Evaluate data processing from surveys and COR stations

Date and Location: *April 7-11, 2003* *Tucson, AZ*

GROUND WATER AND WELL DRILLING: (33500)

This course introduces students to ground water hydrology and the methods of constructing domestic water wells. The course combines extensive classroom lecture with field demonstrations. Field demonstrations include well drilling by air and mud techniques, casing and screen setting, well development, test pumping, and geophysical well logging.

Who should attend: IHS or Tribal technicians, inspectors, and project managers

Course Length: 4 days

Continuing Education Units: 3.2 units, certified by National Ground Water Association

Objectives:

- Observe real drilling operations in multiple geologic environments
- Learn techniques for designing well casings and screens
- Observe well development and abandonment
- Perform a test pump and analyze the data

Date and Location: *May 13-16, 2003* *Minneapolis, MN*

BASIC AUTOCAD: (31000)

This is an elementary course for engineers and technicians with no previous experience in AutoCAD. This course provides an overview of this computer aided drafting system and provides the students with skills to produce elementary drawings as a stepping-stone to more advanced techniques.

Who should attend: IHS or Tribal technicians, inspectors, and project managers

Course Length: 5 days

Continuing Education Units: 4.0

Objectives:

- Learn basic drawing techniques
- Construct and use drawing blocks

Date and Location: *Not offered in fiscal year 2003*

ADVANCED AUTOCAD: (32500)

This is an advanced course for engineers and technicians with a working knowledge of AutoCAD. The AutoCAD elements of the course include, drawing and file management, paper space, LISP routines, and advanced drawing techniques. A working knowledge of basic AutoCAD is needed for this course.

Who should attend: IHS or Tribal engineers and project managers

Course Length: 5 days

Continuing Education Units: 4.0

Objectives:

- Learn advanced drawing techniques
- Work with model and paper space drawings
- Prepare simple LISP routines

Date and Location: *Not offered in fiscal year 2003*

AUTOCAD LAND DEVELOPMENT: (34500)

This course was formally known as Basic SoftDesk. An introduction to the surveying data reduction and design software developed by SoftDesk utilizing the AutoCAD computer aided drafting package. The training includes examples applications in surveying, easement preparation, and earthen design typical of Indian Health Service construction activities.

Who should attend: IHS or Tribal technicians, inspectors, and project managers

Course Length: 4 days

Continuing Education Units: 3.2

Objectives:

- Learn to download survey data from a collector and create points in drawing
- Prepare alignment design for legal drawings
- Create 3D earthen design

Date and Location: *June 16-20, 2003* *Phoenix, AZ*

ADVANCED AUTOCAD LAND DEVELOPMENT: (37500)

Intended for experienced users of the Land Development (SoftDesk) application. Advanced AutoCAD Land Development provides an in-depth look at the 3-D functions of the design package. The course covers advanced terrain modeling and calculations.

Who should attend: IHS or Tribal engineers and project managers

Course Length: 4 days

Continuing Education Units: 3.2

Objectives:

- Prepare designs of 3D earthen structures using 3D polylines
- Learn to use advanced drawing techniques

- Incorporate AutoCAD Map into Land Development projects

Date and Location: *June 23-27, 2003* *Phoenix, AZ*

OSHA CONSTRUCTION SAFETY & CONFINED SPACE: (38500)

This course is targeted for engineering, inspection and construction personnel providing the OSHA 10-hour training course on construction standards. A special emphasis is added on confined space entry and permitting.

Who should attend: IHS or Tribal engineers, technicians, inspectors, and project managers

Course Length: 3 days

Continuing Education Units: 1.6

Objectives:

- Understand the need for construction safety
- Review OSHA construction safety standards
- Understand the elements of a confined space entry permit program

Date and Location: *April 22-24, 2003* *Nome, AK*

OSHA CONSTRUCTION SAFETY & COMPETENT TRENCH: (38700)

This course is targeted for engineering, inspection and construction personnel providing the OSHA 10-hour training course on construction standards. A required OSHA course for individuals designated as the “competent person” who oversees trenching or excavations. The course centers on the OSHA statute for trench and excavation safety.

Who should attend: IHS or Tribal engineers, technicians, inspectors, and project managers

Course Length: 3 days

Continuing Education Units: 1.6

Objectives:

- Understand the need for construction safety
- Review OSHA construction safety standards
- Understand the requirements for becoming the competent trench person

Date and Location: *April 29 – May 3, 2003* *Green Bay WI*

CONSTRUCTION SAFETY PROGRAM DEVELOPMENT: (38400)

A course designed to aid in the development of a construction safety program specific to each Area. The course centers on compliance with existing OSHA requirements, but also looks at program implementation.

Who should attend: IHS or Tribal engineers and project managers

Course Length: 3 days

Continuing Education Units: 1.6

Objectives:

- Understand the need for construction safety
- Review OSHA construction safety standards
- Understand the elements of a safety program

Date and Location: *Not offered in fiscal year 2003*

ONSITE WASTEWATER TREATMENT: (30500)

Persons involved with the evaluation of soil and site conditions for wastewater, designing, or managing systems benefit greatly from this four-day course. Participants learn to conduct site evaluations by working with actual soil samples, watch soil move through plastic models, and design multiples types of systems.

Who should attend: IHS or Tribal engineers, technicians, inspectors, and project managers

Course Length: 4 days

Continuing Education Units: 2.4

Objectives:

- Identify soil types, structure, texture, and color
- Learn the elements of a site survey for on-site waste disposal
- Design on-site wastewater treatment based on soil site survey

Date and Location: *March 17-20, 2003* *Albuquerque, NM*

WASTEWATER PUMPING: (30510)

This course provides sound design techniques for better operation and maintenance of lift stations, force mains, and pressure sewers. The University of Wisconsin teaches this course.

Who should attend: IHS or Tribal engineers and project managers

Course Length: 3 days

Continuing Education Units: 1.8 units, certified by University of Wisconsin

Objectives:

- Develop design solutions to wastewater pumps stations
- Learn to optimize pump station
- Explore maintenance issues and problems

Date and Location: *TBD* *Madison, WI*

LEADERSHIP DEVELOPMENT FOR THE ENGINEER: (35400)

This course develops leadership skills, teaches you how to lead an organization or department, and apply a leadership style appropriate for the situation. Charles Calhoun through ASCE presents the course.

Who should attend: IHS or Tribal engineers and project managers

Course Length: 3 days

Continuing Education Units: 1.6 units, certified by ASCE

Objectives:

- Develop or expand leadership skills
- Understand and apply leadership styles to situations
- Look at decision making processes

Date and Location: *Not offered in fiscal year 2003*

PROGRAMMABLE LOGIC CONTROLLERS: (30100)

An introductory course to programmable logic controllers (PLC) that looks at the advantages of PLC controls over relay based. The course covers PLC programming, ladder logic, and troubleshooting. The course is intended for engineers considering PLC controls and operators with PLC systems. NTT is the instructor for this course.

Who should attend: IHS or Tribal engineers and project managers

Course Length: 3 days

Continuing Education Units: 1.6

Objectives:

- Understand PLC operations and installation
- Learn basic ladder logic programming
- Develop skills in troubleshooting controllers

Date and Location: *June 3-5, 2003* *Minneapolis, MN*

LAND USE & INFRASTRUCTURE PLANNING: (39100)

A course designed to aid project managers, engineers and planners with the problems associated with land use planning and incorporating water, sewer, and other utilities. The course looks at the special problems faced with planning on Indian lands.

Who should attend: IHS or Tribal engineers and project managers

Course Length: 3 days

Continuing Education Units: 1.8

Objectives:

- Understand the concepts of planning for construction
- Look at the tools available to make planning decisions

Date and Location: *May 13-15, 2003* *Albuquerque, NM*

New

MID-LEVEL TECHNICAL TRAINING (ENGINEERS): (30100)

A course designed to examine current technical challenges for midlevel engineers. Topics included in the areas of project management, water quality design, and construction.

Who should attend: IHS district and area staff engineers

Course Length: 3 days

Continuing Education Units: 1.8

Objectives:

- Provide design information on current engineering topics
- Review technical presentations of notable construction activities

Date and Location: *January 28-30, 2003* *Albuquerque, NM*

New

WATER QUALITY AND ARSENIC: (30200)

A design course for engineers that centers on the removal of arsenic from drinking water. Current treatment technologies will be reviewed in this course. The quality of existing sources and their effect on treatment will be discussed.

Who should attend: IHS or Tribal engineers and project managers

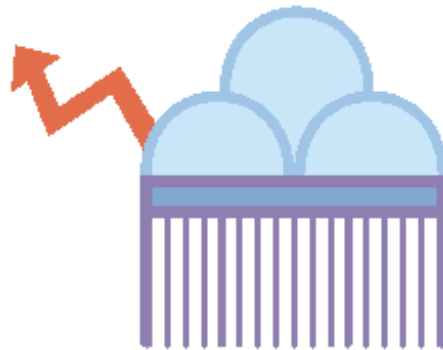
Course Length: 3 days

Continuing Education Units: 1.8

Objectives:

- Review water quality chemistry and the occurrence of Arsenic
- Learn the theory of pilot plant design
- Review current Arsenic treatment technologies

Date and Location: *June 10-12, 2003* *Albuquerque, NM*



UTILITY OPERATION AND MAINTENANCE

ELECTRICAL CONTROLS FOR UTILITY OPERATORS: (50500)

This course provides operational knowledge of basic electrical concepts and exposure to common electrical components used in water and sewer utility control systems. In this popular course, operators learn to use electrical meters and apply elementary trouble shooting techniques while constructing and testing actual pump control panels. This course relies heavily on hands-on activities and classroom participation.

Who should attend: Tribal operators and utility managers

Course Length: 3 days

Continuing Education Units: 1.8

Objectives:

- Learn the basics of electricity and electrical control components
- Learn to use a multi meter
- Build working electrical panels
- Learn basic troubleshooting

Date and Location:	<i>October 8-10, 2002</i>	<i>Fairbanks, AK</i>
	<i>October 22-24, 2002</i>	<i>Bismarck, ND</i>
	<i>November 5-7, 2002</i>	<i>Sitka, AK</i>
	<i>November 19- 21, 2002</i>	<i>Phoenix, AZ</i>
	<i>December 17-19, 2002</i>	<i>Dillingham, AK</i>
	<i>February 11-13, 2002</i>	<i>Kotzebue, AK</i>
	<i>June 3-5, 2003</i>	<i>Bethel, AK</i>

CROSS CONNECTION CONTROL: (55000)

In this workshop, students will explore the public health significance of cross connections in water utility systems. Students will gain essential, fundamental knowledge about types and causes of backflow, types of backflow prevention assemblies and their applications. Students will learn the requirements of backflow prevention associated with varying degrees of hazard. In addition, the standards and administrative requirements for a utility cross connection control program will be discussed in detail. This course is designed for those who want to improve their knowledge of cross connection control program development, administration, and management.

Who should attend: IHS or Tribal engineers and project managers

Course Length: 3 days

Continuing Education Units: 1.8

Objectives:

- Review the elements of a cross connection control program
- Learn to identify backflow prevention devices
- Learn backflow device testing

Date and Location: *December 3-5, 2002* *Ukiah, CA*

PUMPS AND PUMPING SYSTEM, OPERATION & REPAIR: (56000)

Designed as the follow-up course to "Electrical Controls for Utility Operators", this three-day course provides hands-on training in pumps and pumping system operation and repair. Student exercises reinforce and build skills in pump components and troubleshooting techniques using actual pumping equipment for disassembly and demonstration purposes. Inclusion of electrical control panels builds on elements of previous courses to allow in-class-troubleshooting exercises using complete, operational water pumping systems.

Who should attend: Tribal operators and utility managers

Course Length: 3 days

Continuing Education Units: 1.8

Objectives:

- Learn the basics of pumps
- Review water system hydraulics
- Learn basic water system troubleshooting

Date and Location: *October 1-3, 2002* *Anchorage, AK*
 January 14-16, 2003 *Nome, AK*
 April 22- 24, 2003 *Rapid City, SD*
 April 29 – May 1, 2003 *Phoenix, AZ*

OSHA CONSTRUCTION SAFETY & CONFINED SPACE: (38500)

This course is targeted for engineering, inspection and construction personnel providing the OSHA 10-hour training course on construction standards. A special emphasis is added on confined space entry and permitting.

Who should attend: IHS or Tribal engineers, technicians, inspectors, and project managers

Course Length: 3 days

Continuing Education Units: 1.6

Objectives:

- Understand the need for construction safety
- Review OSHA construction safety standards
- Understand the elements of a confined space entry permit program

Date and Location: *April 22-24, 2003* *Nome, AK*

OSHA CONSTRUCTION SAFETY & COMPETENT TRENCH: (38700)

This course is targeted for engineering, inspection and construction personnel providing the OSHA 10-hour training course on construction standards. A required OSHA course for individuals designated as the “competent person” who oversees trenching or excavations. The course centers on the OSHA statute for trench and excavation safety.

Who should attend: IHS or Tribal engineers, technicians, inspectors, and project managers

Course Length: 3 days

Continuing Education Units: 1.6

Objectives:

- Understand the need for construction safety
- Review OSHA construction safety standards
- Understand the requirements for becoming the competent trench person

Date and Location: *April 29 – May 3, 2003* *Green Bay WI*

WATER DISTRIBUTION SYSTEM FIELD OPERATIONS I: (54000)

This hands-on course teaches operators operating characteristics and repair techniques of common water and sewer equipment including valves, hydrants, piping, and pressure regulators to name a few. By working on actual utility equipment, operators will be provided the skills to perform timely on-site repairs and maintenance in a cost effective manner. 1.8 CEUs

Who should attend: Tribal operators and utility managers

Course Length: 3 days

Continuing Education Units: 1.8

Objectives:

- Learn to identify the basic components of a water distribution system

- Practice gate valve assembly and repair
- Perform water system taps

Date and Location: *February 25-27, 2003 Phoenix, AZ*

**WATER DISINFECTION AND FLUORIDATION FOR SMALL WATER SYSTEMS:
(51000)**

This training course provides maintenance personnel with the necessary skills and knowledge to effectively disinfect and fluoridate small communities water supplies. Lessons include an overview of EPA regulations, chemical safety, introduction to treatment processes, field analysis and performance of dosage calculations. Hands-on maintenance and trouble shooting of chemical feed pumps is included.

Who should attend: Tribal operators and utility managers

Course Length: 3 days

Continuing Education Units: 1.8

Objectives:

- Understand the basics of Fluoridation and Disinfection
- Learn to identify chemical feed pump components
- Perform chemical dosage calculations
- Perform field tests for Fluoride and Chlorine
- Learn basic troubleshooting of chemical feed pumps

Date and Location: *October 8-10, 2002 Nome, AK*
October 29-31, 2002 Escondido, CA

GAS CHLORINATION SYSTEMS: (51100)

The special safety and operating techniques used in handling and injecting chlorine gas are examined in this new course. The requirements of OSHA, EPA, and DOT are covered to provide operators an insight to the regulations of using chlorine gas.

Who should attend: Tribal operators and utility managers

Course Length: 3 days

Continuing Education Units: 1.8

Objectives:

- Understand the laws regarding the use of gas chlorine

- Learn safe chemical handling and use of chlorine gas
- Learn the basics of troubleshooting and repair of gas systems

Date and Location: *Not offered in fiscal year 2003*

**OPERATION & MAINTENANCE ORGANIZATIONS FOR DECISION-MAKERS:
(57000)**

This course provides an overview of the reasons for establishing a well-defined water, sewer and solid waste operational framework. This course explores the possible structural options and components of an effectively operating tribal utility maintenance organization. This course is designed for tribal council members, administrators, and other tribal management personnel.

Who should attend: Tribal council members, administrators, and utility managers

Course Length: 3 days

Continuing Education Units: 1.8

Objectives:

- Provides the framework to look at organizations and evaluate their effectiveness
- Evaluate your utility structure
- Learn from other organizations

Date and Location: *Not offered in fiscal year 2003*

TRIBAL UTILITY MANAGEMENT: (51500)

A course intended for first line supervisors of utility system workers and personnel. Elements of supervision, motivation, and conflict management are provided from a cultural and realistic viewpoint. Goals include developing management skills for supervisors of tribal utility laborers subject to frequent job turnover rates as well as developing understanding of labor laws and requirements. Problem solving techniques and student interactions are emphasized.

Who should attend: Tribal operators and utility managers

Course Length: 3 days

Continuing Education Units: 1.8

Objectives:

- Develop personnel skills with first line utility supervisors
- Provide an overview of a supervisor's requirements

Date and Location: *Not offered in fiscal year 2003*

EFFECTIVE MAINTENANCE MANAGEMENT: (50000)

A seminar which teaches students how to establish a maintenance organization that will increase productivity, lower costs, reduce equipment downtime and facilitate preventive maintenance with special emphasis on computer aided maintenance activities. This seminar is structured on a proven curriculum developed in conjunction with the University of Wisconsin and targets special problems faced by tribal utility operators.

Who should attend: Tribal operators and utility managers

Course Length: 3 days

Continuing Education Units: 1.8

Objectives:

- Develop a preventive maintenance program
- Evaluate your facilities needs for PM
- Learn PM scheduling

Date and Location: *Not offered in fiscal year 2003*

COMPUTER BASED UTILITY MANAGEMENT: (52500)

A course used with Effective Maintenance Management (EMM) as the prerequisite. Students taking this course will use the skills learned in EMM to develop specific computer based management programs for their utility. Students will be asked to bring specific information about their organization and, with the help of the instructor, generate management plans for their utility. Prior knowledge and use of personal computers will be required. Instruction will be provided in a computer lab.

Who should attend: Tribal operators and utility managers

Course Length: 3 days

Continuing Education Units: 1.8

Objectives:

- Develop a computer based PM schedule for your facility

Date and Location: *Not offered in fiscal year 2003*

SOLID WASTE LANDFILL OPERATIONS: (13500)

This course is the Solid Waste Association of North America (SWANA) Manger of Landfill Operations (MOLO). In this three-day seminar, recent laws and regulatory changes are used as the basis for explaining the solid waste compliance activities faced by tribes and tribal operators. Guidance is provided on the Resource Conservation and Recovery Act (RCRA), the Indian Lands Open Dumps Cleanup Act, and the development of solid waste management plans and landfill operations specific to tribal systems.

Who should attend: Tribal operators and utility managers

Course Length: 3 days

Continuing Education Units: 1.8

Objectives:

- Learn to manage a solid waste facility
- Prepare for SWANA certification

Date and Location: *Not offered in fiscal year 2003*

SOLID WASTE OPEN DUMP ASSESSMENTS: (16500)

This course discusses considerations in designing an open dump assessment program. Developed in conjunction with the University of Wisconsin, students will be provided an overview of the steps to assessing the content and potential threat to health and the environment posed by an open dump. Examples of assessment programs will be provided.

Who should attend: Tribal operators and utility managers

Course Length: 3 days

Continuing Education Units: 1.8

Objectives:

- Conduct field examinations of an open dump site
- Prepare recommendations on a site
- Examine the RCRA requirements for landfills

Date and Location: *June 6-8, 2003* *Bismarck, ND*

FACILITIES MANAGEMENT

DIAGNOSING INDOOR AIR QUALITY: (19000)

This course is an introduction to air quality concepts. It includes the identification of hazards, evaluation techniques and sampling methods. Students will learn what impact building dynamics plays on the indoor air quality. They will also have the opportunity for “hands-on” exercises to measure and assess volatile organic compounds (VOCs), bioaerosols, and other hazardous indoor air contaminants including carbon monoxide and radon. Topics will be discussed from a routine institutional standpoint, as well as in emergency settings.

Who should attend: Institutional environmental health officers, safety officers, HVAC technicians, and facility engineers and managers.

Course Length: 3 days

Continuing Education Units: 2.1

Objectives:

- Learn and become familiar with the equipment and techniques used to assess building ventilation, occupant comfort, VOCs, bioaerosols, carbon monoxide, and radon
- Learn about ventilation rates and pressure relationships, CO2 dynamics, and occupant comfort
- Learn difference sampling methods and techniques
- Learn to analyze and interpret the sampling results

Date and Location: *August 11-13, 2003* *Madison, WI*

REMEDIATING INDOOR AIR QUALITY PROBLEMS: (19010)

This course addresses techniques and methods to “cure” buildings of the most difficult class of indoor air contaminants – biological contaminants. The course content will extend to techniques and methods that have proven unsuccessful in remediating contamination problems as well as those methods that have had success.

Who should attend: Institutional environmental health officers, safety officers, HVAC technicians, and facility engineers and managers.

Course Length: 2 days

Continuing Education Units: 1.4

Objectives:

- Become familiar with remediation strategy development
- Learn the effectiveness of biocides and antimicrobials
- Understand air handling and duct remediation requirements
- Learn how to select a restoration specialist

Date and Location: *August 14-15, 2003* *Madison, WI*

**LIFE SAFETY CODE FOR FACILITIES MANAGERS AND SAFETY OFFICERS:
(41500)**

This three-day course covers the fundamental chapters (Chapters 1-11) of the NFPA Life Safety Code (NFPA 101, 2000 Edition), plus the chapters for new and existing Healthcare Occupancies (Chapters 18 & 19). Students will gain a working knowledge of the code organization and the philosophy behind the code provisions. The course includes instructor-led presentations and student exercises where groups will use the code to find answers to life safety problems. Each participant will receive a copy of the Life Safety Code Handbook, 2000 edition, and a student workbook.

Who should attend: Full time or collateral duty Safety Officers and Facilities Managers in the ambulatory care or hospital setting.

Course Length: 3 days

Continuing Education Units: not available

Objectives:

- Gain a thorough understanding of the Life Safety Code (NFPA 101) with particular emphasis on the core chapters (1-11) and the Healthcare Occupancy chapters (18 and 19)
- Acquire the ability to apply the knowledge gained at the student's facility in order to insure compliance with the Life Safety Code requirements
- Gain the knowledge required to insure a fire-safe environment at the student's facility

Date and Location: *January 7-9, 2003* *Las Vegas, NV*

JCAHO/STANDARDS FOR HEALTH CARE FACILITIES – NFPA 99: (42500)

This course covers the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) Environment of Care Standards and reviews National Fire Protection Association (NFPA) 99, Standards for Health Care Facilities. The requirements for compliance with the design, installation and maintenance of electrical emergency power and medical gas systems are provided. The student will gain a working knowledge of the standard organization and the philosophy behind the code provisions. This course will “walk” through the standard using

examples where appropriate to illustrate the provisions. The students will be taught how to find provisions in the standard and have an understanding to apply those requirements. .

Who should attend: Full time or collateral duty Safety Officers and Facilities Managers in the ambulatory care or hospital setting. Risk Managers and Quality Assurance Managers may also benefit from this training.

Course Length: 3 days.

Continuing Education Units: not available

Objectives:

- Gain a thorough understanding of the JCAHO Environment of Care Standards
- Learn to develop Environment of Care Management Plans
- Learn to aggregate and evaluate data for Environment of Care Performance Standards
- Gain a thorough understanding of NFPA 99, Standards for Health Care Facilities
- Acquire the ability to apply the knowledge gained at the student's facility in order to ensure compliance with the NFPA 99 requirements

Date and Location: *May 6-8, 2003* *Phoenix, AZ*

HEALTHCARE SAFETY ACCREDITATION: (43000)

This three-day course is an overview of what Facilities Managers and Safety Officers need to know to fully comply with the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) Environment of Care standards, Center for Medicare/Medicaid Services (CMS) Physical Environment standards, and Accreditation Association for Ambulatory Health Care (AAAHC) Facilities and Environment standards. Students will receive information on survey types and methodologies for each of the accrediting bodies. A representative from CMS teaches the CMS portion of the course. Participants will receive the latest version of the JCAHO *Environment of Care Essentials Manual* in addition to a student handbook filled with lecture notes and valuable reference materials. Hands-on activities in developing a Hazard Vulnerability Analysis and in Establishing/Measuring Performance Standards augment the classroom sessions.

Who should attend: Newly appointed Facility Managers and Safety Officers needing an introduction to the topic or for experienced staff wanting a review of the standards with an emphasis on changes that have occurred in the standards. Risk Managers, Quality Assurance Managers, and those responsible for healthcare accreditation will also benefit from this training.

Course Length: 3 days

Continuing Education Units: not available

Objectives:

- Gain a thorough understanding of the JCAHO Environment of Care Standards
- Gain a thorough understanding of the Center for Medicare/Medicaid Services (CMS) Physical Environment standards
- Gain a thorough understanding of the Accreditation Association for Ambulatory Health Care (AAAHC) Facilities and Environment standards
- Learn the survey requirements and methodologies of the three major accreditation bodies.
- Learn to develop Environment of Care Management Plans
- Learn to aggregate and evaluate data for Environment of Care Performance Standards

Date and Location: *September 9-11, 2003* *Denver, Colorado*

NFPA/JCAHO/OSHA FOR HEALTHCARE FACILITIES: (43100)

This 5-day course combines condensed versions of the National Fire Protection Association Life Safety Code (2000 edition), the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) Environment of Care standards, and the Occupational Safety and Health Administration (OSHA) standards applicable to healthcare facilities. Nationally recognized experts teach the NFPA and JCAHO sections of this course, while Institutional Environmental Health Officers from the Indian Health Service (IHS) teach the OSHA portion. These Institutional Environmental Health Officers bring years of experience specific to IHS healthcare facilities. Participants receive the current edition of the NFPA Life Safety Code, the current edition of the JCAHO *Environment of Care Essentials Manual*, and a student handbook filled with speaker notes and valuable reference materials.

Who should attend: Facility Managers and Safety Officers with all levels of experience and training. Risk Managers, Quality Assurance Managers, and those responsible for healthcare accreditation will also benefit from this training.

Course Length: 5 days

Continuing Education Units: not available

Objectives:

- Gain a thorough understanding of the JCAHO Environment of Care Standards including the latest changes and requirements
- Gain a working knowledge and understanding of the Life Safety Code with particular emphasis placed upon healthcare and business occupancies
- Become familiar with OSHA Standards applicable to the healthcare setting

Date and Location: *July 14-18, 2003* *Minneapolis, Minnesota*

COMMISSIONING OF HVAC SYSTEMS: (45600)

This 5-day course provides the technical skills necessary to commission HVAC and control systems in commercial buildings. The course combines focused classroom training with hands-on lab sessions. Systems to be commissioned include device level testing for sensors and actuators, component level testing for coils, fans, pumps, dampers, and valves, terminal units testing for VAV boxes and coil units, air handling units, hydronic systems, and primary equipment. Live DDC workstations will be used for DDC system front-end setup, graphics, trending and alarming functions.

Who should attend: Design, electrical, & mechanical engineers, facility managers, HVAC technicians, and maintenance supervisors.

Course Length: 5 days

Continuing Education Units: 4.0

Objectives:

- Learn how to perform functional performance testing on your building systems
- Build your expertise in the area of testing, diagnosing and optimizing the performance of building HVAC systems
- Expand your technical skills for commissioning HVAC and control systems

Date and Location: *Not offered in fiscal year 2003* *Des Moines, Iowa*

TOTAL BUILDING COMMISSIONING PROCESS: (45610)

New

This 3-day course provides the attendees the understanding to implement quality management techniques when constructing or renovating buildings. You'll learn how to effectively plan and communicate the goals and objectives of the owner in order to achieve higher quality and value in the new construction at a reduced cost. Utilizing a commissioning process ensures that building owners receive high-quality building systems, effective operations and maintenance manuals, and well trained operating staff. The commissioning process is a basic requirement of the new green building evaluation program, LEED.

Who should attend: Design, electrical, & mechanical engineers, facility managers, HVAC technicians, and maintenance supervisors.

Course Length: 3 days

Continuing Education Units: 2.4

Objectives:

- How to implement an effective and successful quality design and construction approach that incorporates the commissioning process

- How commissioning, a tool originally developed for HVAC& R systems, is being extended to all building systems
- Examine the relationship of commissioning to successful industrial processes and to sustainable and green building design, and total building delivery

Date and Location: *April 21-23, 2003* *Madison, WI*

HANDS-ON MAINTENANCE TRAINING: (49000)

A basic maintenance course that covers maintenance problems that might be encountered in housing or facility maintenance. Participants will be taken step-by-step through many different electrical and plumbing repairs. Detailed demonstrations will be utilized to explain how proven maintenance techniques can be used for troubleshooting, testing for problems, and for making adjustments, repairs, and replacements.

Who should attend: Maintenance personnel, electrician & plumber technicians, maintenance supervisors, foremen, and facility managers.

Course Length: 3 days

Continuing Education Units: not available

Objectives:

- To learn and perform maintenance skills.
- To perform common electrical and plumbing repairs.
- Learn to re-pin locks

Date and Location: *November 4-6, 2002* *Phoenix, AZ*

HANDS-ON MAINTENANCE TRAINING #2: (49100)

This maintenance course is an extension of the basic Hands-on Maintenance Training. This course will cover determination of wire size and breakers for various circuits, GFCI receptacle wiring for single locations, and various wiring configurations for duplex receptacles, 3 and 4-way switches. Students will learn how to repair Sloan valves and other plumbing valves, and how to design and build plumbing systems.

Who should attend: Maintenance personnel, electrician & plumber technicians, maintenance supervisors, foremen, and facility managers.

Course Length: 2 days

Continuing Education Units: not available

Objectives:

- Continuation of Hands-on Maintenance
- Learn more complex electrical and plumbing repair procedures

Date and Location: *November 7-8, 2002* *Phoenix, AZ*

**ELECTRICAL FUNDAMENTALS & HANDS-ON HVAC/R TROUBLESHOOTING:
(45900)**

This 2-day training session will provide students with the necessary fundamental concepts of electricity and then apply that knowledge in hands-on exercises as the course progresses. Each workstation will contain a wide range of HVAC/R electrical components and digital and analog test equipment to ensure a true hands-on learning experience. Each student will work from schematic diagrams and will learn to wire and test components and circuits. Students will also learn how to troubleshoot actual HVAC/R electrical circuits.

Who should attend: Maintenance personnel, HVAC/R technicians, and facility managers.

Course Length: Two days

Continuing Education Units: not available

Objectives:

- To learn the fundamental concepts of electricity
- To learn to wire various circuits and test them
- To learn to detect and repair various HVAC/R and electrical problems
-

Date and Location: *November 21-22, 2002* *Albuquerque, NM*

AIR CONDITIONING – TESTING, ADJUSTING AND BALANCING: (45600)

This intensive 5-day course provides students with the knowledge to balance air and water systems, adjust new and existing systems, to verify equipment and automatic controls performance, to measure sound and vibration, and to estimate costs. Students will have the opportunity to conduct various tests in “how to do it” laboratory settings.

Who should attend: Maintenance personnel, HVAC technicians, Facility Engineers and Managers.

Course Length: 5 days

Continuing Education Units: 3.5

Objectives:

- Learn how to balance air and water systems
- Learn how to adjust new and existing systems to provide design quantities
- Learn how to verify equipment and automatic controls performance
- Learn how to conduct cost estimates

Date and Location: *April 21-25, 2003* *Madison, WI*

New

PERFORMANCE BASED SCOPES OF WORK: (44350)

This 2-day course will cover proper writing of contract specifications and scopes of work for today's newer forms of contracting for construction projects. Students will learn the positives and negatives between conventional and performance based construction contracting.

Who should attend: Architects, engineers, facility engineers and managers, contract administrators, and any other decision makers associated with construction contracts.

Course Length: 2 days

Continuing Education Units: not available

Objectives:

- Learn to write contract specifications and scopes of work that ensures the owner of a successful quality product
- Learn to effectively develop and respond to a RFP/RFQ
- Understand the legal issues impacting performance-based contracts
- Understand the risk involved with performance-based contracts

Date and Location: *December 12-13, 2002* *Dallas, TX*

HEALTH SYSTEMS PLANNING: (44000)

This 2-day course covers the Health Systems Planning (HSP), the IHS space criteria for designing health care facilities, discussion of the various templates (clinical space modules) used in IHS when designing healthcare construction, Program Justification Document (PJD) / Program of Requirement Document (POR), estimating new activation costs, and funding utilization.

Who should attend: IHS Area planners, Area Facilities staff, tribal staff, and tribal consultants.

Course Length: 2 days

Continuing Education Units: not available

Course Length: 3 days

Continuing Education Units: not available

Objectives:

- Learn the computer database aspects of the inspection process
- Learn how the data is manipulated between the Facilities database and the vendor's database
- Learn to conduct a facilities assessment

Date and Location: *October 8-10, 2002* *Albuquerque, NM*

NATIONAL ELECTRICAL CODE – NFPA 70: (46000)

This course covers the requirements for compliance with the National Electrical Code (NEC) in new and existing buildings. The code changes every three years so it is mandatory that employees stay abreast of the changes.

Who should attend: Facilities engineers and managers, electricians, and safety officers.

Course Length: 3 days

Continuing Education Units: 2.1

Objectives:

- Provide a basic understanding of the NEC
- Learn the new changes in the code
- Learn to properly select and size conductors for different applications
- Learn the proper applications where ground-fault protection of equipment is required
- Learn proper grounding requirements

Date and Location: *November 19-21, 2002* *Las Vegas, NV*
January 28-30, 2003 *Portland Area*

NATIONAL FIRE ALARM CODE (NFPA 72): (46700)

This 2-day “hands-on” course covers the requirements for compliance with the National Fire Alarm Code (NFPA 72). Students will learn when and where codes apply and what is actually required. Course agenda will include fundamentals of fire alarm systems, household fire warning equipment, protected premises fire alarm systems, initiating devices, and inspecting, testing and maintenance.

Who should attend: Facilities engineers and managers, electricians, and safety officers.

Course Length: 2 days

Continuing Education Units: 1.4

Objectives:

- Provide a basic understanding of the NFPA 72
- Learn how to navigate within the codebook for different situations
- Learn about the different detectors, how they operate and where you should and should not use them
- Learn the proper installation, maintenance, and inspection testing techniques to maintain your system
- Learn how other codes and standards affect fire alarm system design and installation

Date and Location: *Not offered in fiscal year 2003*

AFE CERTIFIED PLANT ENGINEER (CPE) REVIEW PROGRAM: (40900)

This course covers many aspects of facilities engineering. This course serves as a “tune-up” for the Certified Plant Engineer Exam. Topics included are HVAC and environmental engineering, civil, structural, mechanical, and electrical engineering, OSHA and EPA standards and their application to facilities, maintenance management, and engineering economics, management, and energy analysis. The duration of this course is 5 days.

Who should attend: Individuals interested in certification as a plant engineer.

Course Length: 5 days

Continuing Education Units: not available

Objectives:

- Review subject matter that will typically be in the Certified Plant Engineer Examination
- Pass the exam

Date and Location: *December 2-6, 2002* *Madison, WI*

**CERTIFICATION FOR RADIOLOGICAL EQUIPMENT SPECIALIST (CRES)
INTERNATIONAL CERTIFICATION COMMISSION (ICC): (49510)**

This 5-day course is designed to teach the experienced biomed technician the requisite knowledge necessary to successfully pass the CRES test. Subjects covered include radiation physics, radiation safety, anatomy, physiology, x-ray equipment use, CDRII compliance testing, electronics, and troubleshooting.

New

NOTE: If demand is sufficient, testing for the CRES certification will be available on Saturday following the conclusion of the training.

Who should attend: BioMed Engineers and BioMed Technicians at the GS-11 and higher grades.

Course Length: 5 days

Continuing Education Units: not available

Objectives:

- Prepare students for the CRES Certification examination
- Complete the five major areas of study for the CRES certification Anatomy & Physiology, Radiologic Physics and Safety, Electricity & Electronics, Radiologic equipment applications, and technical problem solving

Date and Location: *June 9-13, 2003* *Minneapolis, MN*

**ADVANCED CONCEPTS OF PACS, DICOM, AND
TELERADIOLOGY SYSTEM MAINTENANCE: (49520)**

New

This 5-day course provides the necessary information for service professionals to maintain imaging systems. This rapidly expanding field includes the integration of digital imaging modalities (DICOM) into a picture archiving and communications system (PACS), and teleradiology system maintenance. Emphasis is placed on network topologies, DICOM compatibility, teleradiology, hardware components, software options, system configuration, security principles, network system maintenance, system integration, and network troubleshooting.

Who should attend: BioMed Engineers and BioMed Technicians at the GS-11 and higher grades.

Course Length: 5 days

Continuing Education Units: not available

Objectives:

- Define networking terminology
- Identify network structure and components
- Interpret DICOM 3.x protocol
- Interpret DICOM conformance statements
- Describe typical PACS and Teleradiology systems
- Plan a network
- Install a network

Date and Location: *December 2-6, 2002* *Albuquerque, NM*

New

EMERGENCY GENERATOR O&M: (44550)

This course is a technical overview of on-site power systems. Topics included in this training are basic engine theory, basic electricity and generator theory, and different types of controls systems. In general, anything needed to properly operate & maintain emergency power generation systems is covered. This training is an intense, practical “hands-on” seminar where students are introduced to different brands of generators, engine manufacturers, transfer switches, paralleling systems, and switchgear controls.

Who should attend: Maintenance personnel, electricians, mechanic, and facility managers and engineers. Anyone responsible to ensure sustaining of constant power to a facility should attend.

Course Length: 3 days

Continuing Education Units: not available

Objectives:

- Become familiar with several different types of emergency generation systems
- Understand the relationship and interaction of engines, generators, regulators, controls, and switching
- Learn to size generators for different loads
- Understand the importance of preventive maintenance, including diesel fuel, battery maintenance, gen/engine testing, annual service and record keeping

Date and Location: *January 14-16, 2003* *Phoenix, AZ*

New

EMERGENCY GENERATOR O&M – ON-SITE: (44551)

Similar to Emergency Generator O&M training course except this training is conducted on-site at your facility. General topics included in this training are basic engine theory, basic electricity and generator theory, and different types of controls systems. The equipment in your facility is covered in depth, both theoretically and how it actually operates. Minor problems are introduced to test the students’ ability to “troubleshoot” problems, and determine appropriate solutions.

Who should attend: Maintenance personnel, electricians, mechanic, and facility managers and engineers. Anyone responsible to ensure sustainment of constant power to a facility should attend.

Course Length: 2 days lecture plus 3 single-day, on-site sessions

Continuing Education Units: not available

Objectives:

- Become familiar with the emergency generation system at your site
- Understand the relationship and interaction of engines, generators, regulators, controls, and switching
- Understand the importance of preventive maintenance, including diesel fuel, battery maintenance, gen/engine testing, annual service and record keeping

Date and Location: *April 21-25, 2003* *Navajo Area*

BOILER MAINTENANCE: (45000)

Boiler operation, operator responsibilities, safety and housekeeping, boiler types and construction (hot water/steam systems), codes and standards, operating and safety controls, flame safeguard, combustion systems, water treatment, plant operation (startup, shutdown, cycling, emergencies, inspections, filling the boiler, lighting/raising pressure), maintenance and repairs, and stack emissions. . This training is an intense, practical “hands-on” seminar that emphasizes methods to achieving peak efficiencies, improvement of troubleshooting skills, and the establishment of an effective PM program.

Who should attend: Maintenance personnel, electrician & plumber technicians, maintenance supervisors, foremen, and facility managers.

Course Length: 5 days

Continuing Education Units: not available

Objectives:

- Learn boiler construction features and essential components
- Learn how boilers, burners, and programmers integrate
- Learn combustion requirements and how to adjust burners for proper operation and maximum efficiency
- Learn the common failure modes and how to prevent them
- Learn advanced troubleshooting and problem-solving skills

Date and Location: *November 4-8, 2002* *Anchorage, AK*

BASIC HEATING, VENTILATING AND AIR CONDITIONING: (45500)

Basic concepts in HVAC related to health care facilities including occupant comfort, psychometrics, indoor air quality, fundamentals of heating/cooling load calculations, refrigeration equipment, air conditioning systems overview, air delivery systems (constant/variable air volume, single/multizone, terminal reheat, dual duct), air and water systems (two pipe, four pipe, fan coil units), all water systems (unit ventilators/baseboard

radiators/fan coil units), unitary systems (roof top/air source heat pumps, water source heat pumps, ground source heat pumps, split systems, thru the wall units), and alternative technologies (absorption chillers, engine driven chillers).

Who should attend: Maintenance personnel, electrician technicians, maintenance supervisors, foremen, and facility managers & engineers.

Course Length: 3 days

Continuing Education Units: not available

Objectives:

- Understand HVAC system requirements
- Impact HVAC systems have on costs, comfort, and health of the indoor environment
- Examine equipment/system types and advantages and disadvantages of each

Date and Location: *Not offered in fiscal year 2003*

OPERATION & MAINTENANCE OF HVAC/DDC CONTROLS: (44650)

This course is an overview of HVAC and network-based DDC systems to provide the knowledge to obtain the maximum benefit of direct digital control systems. Students will have the opportunity to work with programmed systems equipped with input simulators to test control strategies and work with the predictive capability of a typical state-of-the-art DDC system.

Who should attend: Maintenance personnel & supervisors, and facility managers and engineers responsible for operation, calibration, and maintenance of HVAC/DDC controls.

Course Length: 5 days

Continuing Education Units: 3.5

Objectives:

- Review basic control concepts in the pneumatic environment
- Transition to equivalent control concepts in the DDC environment
- Work with a fully programmed system to analyze the control strategies and relate them to the hardware-based systems they can replace
- Learn the power of networking and centralization of system performance data as an operational tool for building operators

Date and Location: *November 11-15, 2002 Dallas, TX*

FUNDAMENTALS OF HVAC: (45510)

This course is an overview of heating, ventilation, air conditioning, and refrigeration. The course covers the various HVAC systems and equipment technologies, how these varied systems operate, the advantages and disadvantages of each, and impacts components have on different systems. In addition, students will learn impacts of properly designed vs. improperly designed systems.

Who should attend: Maintenance personnel, electrician, maintenance supervisors, foremen, and facility managers & engineers.

Course Length: 3 days

Continuing Education Units: 2.1

Objectives:

- Understand HVAC system requirements
- Learn different types of HVAC equipment and how they operate
- Learn how to perform heat loss and cooling load calculations
- Learn the importance HVAC systems have on comfort, productivity, and indoor air quality

Date and Location:

June 9-11, 2003

Madison, WI

BASIC PLAN REVIEW FOR HEALTH CARE FACILITIES: (47000)

This course will provide the basic principles of plan review for means of egress and fire protection. The course covers plans and specification content, typical drawing conventions, architectural symbols, detail and section symbols, as well as code information, the “how-to” of performing a plan review, and how not to “miss” important egress and fire protection features. The plan review instruction will be based on the NFPA Life Safety Code, and it is assumed that attendees have some knowledge of the code. Each student will receive the latest version of the Life Safety Code.

Who should attend: Design architects and engineers, facility engineers and managers, environmental health specialists and tribal sanitarians that conduct plan reviews or comprehensive Life Safety surveys.

Course Length: 2 days

Continuing Education Units: not available

Objectives:

- Develop a basic understanding of the latest *NFPA Life Safety Code*
- Apply basic principles of the *NFPA Life Safety Code* while conducting plan reviews

Date and Location: *Not offered in fiscal year 2003*

MP2 MANAGEMENT SYSTEM: (48000)

This course covers the use of the MP2 software system for the day-to-day preventative maintenance and upkeep of healthcare facilities. It will provide an explanation of the importance of efficient work order procedures to effectively maintain health care facilities. Also provided will be step by step instructions on proper methods of work order utilization and follow up to ensure maintenance is being performed effectively and efficiently.

Who should attend: Maintenance personnel, electrician & plumber technicians, maintenance supervisors, foremen, and facility managers.

Course Length: 3 days

Continuing Education Units: not available

Objectives:

- Understanding the MP2 management system
- Understanding your role and responsibility under the MP2 system

Date and Location: *November 5-7, 2002* *Window Rock, AZ*

FIRE PROTECTION SYSTEMS – INSPECTION, TESTS, & MAINTENANCE: (46600)

This 3-day course covers the fire safety codes pertaining to the installation, inspection, testing and maintenance of fire protection systems in health care facilities. It will provide an overview of the types of sprinkler systems and the inspection, tests, and maintenance requirements for these systems. In addition, the inspection, tests, and maintenance of fire alarm systems, kitchen hood systems, and fire extinguishers will be covered. Each participant will receive a copy of NFPA 25, "Inspection, Test, and Maintenance of Water Based Extinguishing Systems" and a copy of the NFPA book *Fire Protection Systems, Inspection, Test, and Maintenance Manual*.

Who should attend: Facilities engineers and managers, electricians, and safety officers.

Course Length: 3 days

Continuing Education Units: not available

Objectives:

- Understanding the fire protection systems available
- Understanding NFPA 25 & 13 and how they interact

Date and Location: *March 25-27, 2003* *Anchorage, AK*

FACILITIES DATA SYSTEMS: (44100)

This course is presented by the Facilities Program Development Branch, Headquarters, and provides an overview of the data systems utilized by the Division of Facilities Management. This training is recommended for staff having responsibility for data entry and review of FDS and BEMARS information on behalf of their respective facility and Area. The training will be “taken to the field” so that employees’ opportunity for training is increased.

Who should attend: Area planners, facility engineers, facility managers, supervisors, staff engineers, and Branch Chiefs.

Course Length: 3 days

Continuing Education Units: not available

Objectives:

- Learn how to input data into the Facilities Data System
- Learn to utilize the updated version of the Facilities Data System

Date and Location: *October 29-31, 2002* *Anchorage, AK*
 March 4-6, 2003 *Nashville, TN*

DIRECT DIGITAL CONTROLS (DDC) FOR HVAC CONTROLS: (44600)

This five-day course provides students with in-depth information on the Direct Digital Controls (DDC) systems available today. In addition, students learn how DDC systems operate, how to utilize DDC for a variety of input/output devices and how to achieve optimum control strategies and energy management objectives. Students will also learn DDC programming concepts and how to use DDC for system diagnostics.

Who should attend: Maintenance personnel, HVAC & electrician technicians, maintenance supervisors, foremen, facility managers, design, electrical, and mechanical engineers.

Course Length: 5 days

Continuing Education Units: 4.0

Objectives:

- Expand knowledge base of DDC systems design and selection for control of building HVAC processes
- Effectively operate and maintain DDC systems
- Effect cost-effective control

Date and Location: *October 28 - November 1, 2002* *Dallas, TX*

BUILDING MECHANICAL SYSTEMS: (45100)

This course will provide an understanding of the fundamentals and basic concepts of mechanical systems for buildings and in a practical, non-mathematical way. Students receive an introduction to heating, ventilation, air conditioning, and refrigeration systems and equipment (coils, fans, terminal devices air handling units, chillers), air systems and equipment (constant volume variable temperature, terminal devices, hoods, ducts), and how these systems should be working. Fire protection equipment and codes are also covered.

Who should attend: Project engineers and managers, HVAC system technicians, and facility managers.

Course Length: 2 days

Continuing Education Units: 1.4

Objectives:

- Obtain a working knowledge of the principles of HVAC/R systems
- Understand HVAC/R codes and equipment
- Learn about environmental control and building automation systems

Date and Location: *April 7-8, 2003* *Madison, WI*

ESTIMATING: (44100)

This course covers the RS Means programs for estimating new, renovated, and repair projects. The course is structured so students have the opportunity to learn several different Means modules. Modules include Repair & Remodeling, Unit Price, Square Foot, and Facilities Maintenance & Repair Estimating. Students will achieve a thorough and complete understanding of the Means cost data, including material, labor and equipment costs,

productivity and crews. Students will learn to analyze and apply factors that impact project costs, regardless of type of construction, geographic area, weather, or other special circumstances surrounding the proposed project.

Who should attend: Design, Mechanical, Electrical and Project Engineers

Course Length: 4 days

Continuing Education Units: not available

Objectives:

- Learn standard industry methods for estimating new construction, additions, and renovations
- Learn several different estimating methods (unit price, square foot, etc.)

Date and Location: *Not offered in fiscal year 2003*

UNIFORM PLUMBING CODE (UPC): (46100)

The Uniform Plumbing Code establishes the standards for the protection of public health, safety and welfare through the proper installation and inspection of plumbing systems. This 2-day “hands-on” course will provide code requirements pertaining to plumbing materials, types of joints, plumbing fixtures, water heater installations, water distribution systems, sanitary drainage systems, traps, testing, and heating.

Who should attend: Facilities engineers and managers, designers, plumbers, and inspectors.

Course Length: 2 days

Continuing Education Units: 1.4

Objectives:

- Plumbing fixtures explained, including prohibited fixtures
- Sizing of sewer drainage systems and venting systems
- Protection of piping, including materials and structures
- Gas-line distribution systems and combustion air ducts, pipes, and openings
- Illustrated water heater installations including venting, combustion air requirements, clearance, protection from damage, and vent terminations

Date and Location: *Not offered in fiscal year 2003*

INTERNATIONAL PLUMBING CODE (UPC): (46110)

The International Plumbing Code establishes the standards for the protection of public health, safety and welfare through the proper installation and inspection of plumbing systems. This 2-day “hands-on” course will provide code requirements pertaining to plumbing materials, types of joints, plumbing fixtures, water heater installations, water distribution systems, sanitary drainage systems, traps, testing, and heating.

Who should attend: Facilities engineers and managers, designers, plumbers, and inspectors.

Course Length: 2 days

Continuing Education Units: 1.4

Objectives:

- Plumbing fixtures explained, including prohibited fixtures
- Sizing of sewer drainage systems and venting systems
- Protection of piping, including materials and structures
- Gas-line distribution systems and combustion air ducts, pipes, and openings
- Illustrated water heater installations including venting, combustion air requirements, clearance, protection from damage, and vent terminations

Date and Location: *Not offered in fiscal year 2003*

CUSTODIAL MAINTENANCE TRAINING: (49200)

This course covers all aspects of basic housekeeping procedures. Topics include equipment/supply storage, chemistry of cleaning, hazardous materials and the OSHA Hazard Communication Standard, Infection Control and infectious waste management, above floor surface cleaning, hard floor surface cleaning, carpeted floor surface cleaning and restroom/shower cleaning. In addition to cleaning methodologies, housekeeping management practices such as staffing patterns and equipment/supply procurement are covered. Participants receive the most current version of the *Custodial Technician Handbook I* and the *Custodial Maintenance Handbook II* from the Cleaning Management Institute along with a student manual containing speaker notes and reference materials. The course instructors are training consultants rather than housekeeping supply or equipment vendors, so students will not be pressured to purchase or use any particular brands of supplies or equipment.

Who should attend: This course is designed for custodians and supervisors of all levels of training and experience. Work leaders and supervisors will particularly benefit from the housekeeping management practices section.

Course Length: 2 days

Continuing Education Units: 1.5

Objectives:

- Gain a thorough knowledge of all basic housekeeping procedures
- Learn how to read and understand a Material Safety Data Sheet (MSDS)
- Learn housekeeping management practices to best utilize staff and equipment available

Date and Location: *March 17-18, 2003* *Santa Fe, New Mexico*

New

HEALTHCARE INCIDENT COMMAND SYSTEM: (14600)

This course will give the participant the knowledge and skills needed to implement the Hospital Emergency Incident Command System (HEICS) at a healthcare facility. HEICS is a management system used in disasters that is based on the Incident Command System used in fire, police, and emergency medical service departments, but adapted for use in a healthcare setting. The course will include an orientation, exercises, and suggestions on an implementation plan. Safety Officers, administrators, and others responsible for emergency management activities in the healthcare setting will benefit. The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) now requires a “common command structure within the organization for responding to and recovery from emergencies, that links with the command structure in the community” (Environment of Care Standard EC.1.4.e). The Incident Command System, the most widely recognized command structure among emergency responders, is a logical choice for the healthcare emergency response and command.

Who should attend: Safety Officers, administrators, and others responsible for emergency management activities in the healthcare setting.

Course Length: 4 days

Continuing Education Units: not available

Objectives:

- Gain a thorough knowledge of the Hospital Emergency Incident Command System
- Gain adequate knowledge to immediately implement HEICS at the local duty station
- Learn to train hospital personnel in the implementation of HEICS
- Learn how to integrate the facility emergency response plan into the community plan

Date and Location: *December 10-13, 2002* *Albuquerque, NM*

New

INDUSTRIAL HYGIENE WITH EMPHASIS ON INDOOR AIR QUALITY AND RADIOLOGICAL HEALTH: (23050)

This four-day course is equally divided between indoor air quality issues and radiological health issues. Day one focuses on the biological contaminants such as mold typically found during indoor air quality investigations. Day two concentrates on the mechanical aspects of heating, ventilation, and air conditioning (HVAC) systems and their roles in indoor air quality complaints. Days three and four are dedicated to the quality assurance aspects of a radiological health program including the sensitometric technique for evaluating processors (STEP) test, balancing diagnostic image quality with radiation exposure, and the concept of maintaining radiation doses to the patient at levels as low as reasonably achievable (ALARA).

Who should attend: Institutional Environmental Health Officers. Facilities Managers and Biomedical Engineers may also benefit from this course.

Course Length: 4 days

Continuing Education Units: not available

Objectives:

- Gain a thorough knowledge of the biological organisms typically associated with indoor air quality complaints
- Gain an understanding of the mechanical components of an HVAC system and their roles in indoor air quality complaints
- Learn all aspects of a comprehensive radiological health quality assurance program

Date and Location: *June 23-26, 2003* *Nashville, TN*