

Continuing Education in
Hospital Engineering,
including BME/CE and
Hospital Safety Staff in the
US

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Department of Veterans Affairs Health Care System

| | |
|--------------------------|---------|
| ● Employees: | 225,000 |
| ● Engineering | 10,000 |
| ● Engineers | 1,000 |
| ● BME/CE | 100 |
| ● BMET | 1,000 |
| ● Construction Engineers | 500 |

Needs Assessment

- Advisory Groups
 - Chief Engineer Advisory Board
 - Biomedical Engineering Advisory Group
 - Safety Advisory Group
 - Resident Engineer Advisory Group

Modes of Training

- Independent Study
 - Support materials
- Satellite Broadcast
 - At the desktop
- Audio Conference
- Face-to-Face
- CD-ROM
- Computer Based

VA Developed Independent Studies

- Medical Terminology
- Mathematics
- Physiology and Anatomy
- Indoor Air Quality
 - CD-ROM
- Boiler Safety
 - Video/DVD
- Supervisor Safety
 - Web Based and Specific to Medical Center

Web Based Example

- Supervisory Safety Training
- 20,000 Supervisors
- One hour Classroom by Safety Officer
- Eight Web Based Modules
- Individual Medical Center Specific as needed, but seamless

Heathkit Courses

- DC Electronics
- AC Electronics
- Electronic Circuits
- Semiconductor Electronics
- Digital Electronics
- Microprocessors

TPC Courses

- Measurements
- Electronics
- Computers
- Carpentry
- Welding
- Refrigeration
- Environmental Services

ITC Learning Courses

- Air Conditioning and Refrigeration
- Electrical Maintenance Fundamentals
- Equipment Operation
- Pump and Compressor Maintenance
- Electric Motor and Control Maintenance
- Electrical Safety
- Mechanical Troubleshooting

Coastal Courses

- Advanced Vibrations
- Vibration Analysis
- Thermography
- Ultrasonics
- Machinery Oil Analysis
- Motor and Motor Controls
- Hydraulics
- Hydraulic Power
- Pneumatics
- Bearings

Veterans Affairs Learning Organization

- 2000 courses online and available from home or work.
- Some are commercial courses such as from SkillSoft
- Some commercial courses modified for VA

VALO Examples

- Biological Hazard Communications
- Confined-space Entry
- Fall Protection Awareness
- Industrial Hygiene Introduction
- Noise Hazards
- OSHA General Industry Safety

Face-to-Face

- Trainee Program
- Engineering Conferences
- Professional Meetings AAMI and ASHE
- Decontamination Training
- X-ray Maintenance
- Networking (now VAKN)

Audio Teleconferencing

- Hardware
- Sites
- Facilitator
- AV/Handouts
- Cost
- Availability

Audio Teleconference Examples

- Radio Frequency for BMETs
- CCE Prep
- CBET Prep
- CHFM Prep
- ACCE Series

Veterans Affairs Knowledge Network (VAKN)- (CDN)

- Satellite Channels
- Studios
- Taping
- Length
- Costs

VAKN Examples

- NFPA 70
- NFPA 101
- NFPA 99
- 30 Hr Construction Safety
- OSHA Confined Space/ Air Force

NFPA 99 VAKN

- Taped a 3-day course in studio
- Broadcast 18 hours
 - 2 hour blocks
- Questions and Answers by Audio
 - After 3 blocks of satellite
 - Questions by email, fax and live
- Furnished Codebook and Workbook

Content Distribution Network

- Video on Demand
- Library of Programs
 - National
 - Regional
 - Local
- Program Length
 - 30 minutes or less

Blended Course Example

- Respiratory Protection Training
 - Train program administrator
 - Web, VAKN, Hands On
- OSHA Training Institute
 - Web Based Course
 - Instructors
- Regional Sites
 - Industrial Hygienists
- Numbers

Evaluations

- Level 1-Reactions/Satisfaction
- Level 2 – Learning/Exam
- Level 3 – Transfer/Application
- Level 4 - Business Results
- Return on Investment

Private Sector

- Company Courses
- Professional Courses by
 - Audio
 - Web
 - Face to Face
- Self Study