Course: Chemistry for Emergency Response (R0233)

Curriculum: Hazardous Materials

This course is designed to prepare the responder to function safely at the scene of a hazardous materials incident by understanding the potential hazards. This is accomplished by gaining recognition of chemical nomenclature and basic principles of chemistry in order to assess risks to responders and the public. The course seeks to convey to first responders or prevention personnel a sound understanding of the basic chemistry of hazardous materials to permit them to correctly assess the threat posed by hazardous materials incidents that may occur accidentally or intentionally. Problem-solving sessions and interactive discussion cover topics such as salts and inorganic nonsalts, hydrocarbons, hydrocarbon derivatives, and hydrocarbon radicals. Applying the science of chemistry to thermodynamics, volatility and combustion provides real-world opportunities.

Criteria for Contract Instructor Selection

All new contract instructors shall be evaluated in three consecutive course deliveries in accordance with the National Fire Academy’s (NFA’s) Contract Instructor Evaluation program. Existing contract instructors are subject to evaluation in accordance with this program.

1. Academic Requirement
   a. The candidate should possess an associate degree, preferably a bachelor’s degree, from an institution that is accredited in fire science, health science or chemistry or related science or equivalent with a strong emphasis in chemistry, toxicology, physiology or related courses.
   b. Certification as a hazardous materials technician.
   c. International Fire Service Accreditation Congress or Professional Qualifications Board Fire Service Instructor II certification is recommended.
   d. Course attendance or attendance as a contract instructor trainee upon preliminary approval of the application.

2. Instructional Experience
   a. Documented ability to explain technical science topics relating to chemistry and hazardous materials response to a diverse student population with a broad range of training and experience.
b. Ability to instruct courses or materials similar to the course content, at the community college, state or regional level, demonstrated by documentation of experience and a copy of at least three student or supervisor evaluations of instructional ability from courses taught with similar content.

3. **Documented Knowledge and Experience in the Subject Area**
   
a. Current knowledge and significant experience in providing hazardous materials response demonstrated by documentation of experience or equivalent training or a combination of both experience and training.

b. Current knowledge about weapons of mass destruction as demonstrated by documentation of experience or equivalent training or a combination of both experience and training.


4. **Additional Submittals**
   
a. For one subject or course related to the subject matter, provide a 12- to 18-minute video or digital video disk demonstrating your instructional style. This video will be used to evaluate your teaching style in a student-centric adult learning environment, or attend the course “Chemistry for Emergency Response” and successfully teach a component of the course that is designated and evaluated by the Training Specialist, Instructional Systems Specialist, or NFA Manager.

b. Submission of a written essay not to exceed 500 words explaining how the instructor candidate has effected successful organizational change within the fire/Emergency Medical Services field or related discipline.

5. **Continuing Practice or Education**
   
Ability to maintain currency in the field and the specific course by:

a. teaching a similar course at a training academy, college or university;

b. taking a similar course within the last five years;

c. teaching the course at the NFA or in the field;

d. writing and researching a paper or article related to the course topic for at least one of the fire service or related disciplines’ trade journals within the last two years; or

e. current certification as a Certified Safety Professional or Certified Hazardous Materials manager or other associated certifications requiring currency.
Failure to provide approved documentation of ongoing training or instruction may result in revocation of the contract instructor status.

6. How to Submit an Application

The following documents are required with each submission:

a. A cover letter listing the courses you want to teach.
b. Your résumé.
c. Documentation that clearly addresses how you meet the instructor selection criteria for each course you are seeking to teach (e.g., academic requirement, instructional experience, knowledge and experience in the subject matter, and continuing practice or education). This document needs to be written in that order. Incomplete packages will not be processed.
d. Three references from persons who are knowledgeable about your character as well as your teaching ability. One reference letter should be from the department or agency head in your organization or certifying organization.
e. Include a current email address so we can communicate more efficiently with you.

Application package(s) must be submitted to:

National Fire Academy
fema-nfainstructorapp@fema.dhs.gov