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US Army Corps of Engineers
USACE Professional Development Support Center (PDSC)

The Purple Book and PROSPECT Training Needs Survey FY2004

MANAGERS AND SUPERVISORS TRAINING HANDBOOK

CEHRP 690-1-1

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MANAGERS AND SUPERVISORS TRAINING HANDBOOK

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HOW TO USE THIS HANDBOOK

Training is a vital part of any organization. This has never been more true that in this time of accelerated change. Training needs change as the organization changes. Government downsizing has changed peoples' jobs to include new tasks and responsibilities. Training is needed to ensure success. To be effective, an organization's training system should be at least as dynamic as the organization. This handbook is issued as a tool to help satisfy those needs.

This handbook is divided into 7 sections. Section 1 contains instructions on how to submit your FY04 training requirements using our new online registration system; Training information assisting the supervisor in using the handbook effectively; and a Continuing Education Credits listing. Sections 2 through 6 of this handbook describe courses available to Corps of Engineers and other Government agency employees from various sources. Section 7 is for Corps of Engineers use only. Each section has specific school information about where, how, cost and who to contact. Use the course purpose, description, and prerequisites to guide in your selection of courses best adapted to individual needs by answering such questions as:

- What does this employee need to know or be able to do?
- Is the employee ready for this course?
- Has this employee already had this course or learned the skills the course will provide?

TRAINING MANAGEMENT INFORMATION SYSTEMS

ONLINE REGISTRATION INSTRUCTIONS

Use this catalog to determine your FY2004 training requirements for the Proponent Sponsored Engineer (PROSPECT) Program courses. The catalog contains our projected schedule of classroom courses for FY2004. This catalog serves as a supplement to the TMIS online registration which contains course or date changes that have been made since publishing this catalog. The catalog is divided into 7 sections:

- Section 1: On-Line Survey Instructions/Schedule and General Information.
- Section 2: PROSPECT Training
- Section 3: Additional Distance Learning Information
- Section 4: Installation Support Training
- Section 5: Federal Executive Institute (FEI) and Executive Seminar Center (ESC) Training
- Section 6: Long Term Training
- Section 7: Army Service Schools and Defense Management Education and Training (DMET) (Corps Only)

By name registration and enrollment in PROSPECT courses becomes a reality with fielding of the new Training Management Information System (TMIS). The TMIS program uses current computer technology to link the customers' need for training and the decision to pay for and attend training in an electronic environment that includes the students, their supervisor, their training coordinator, and TMIS. Registration data from the USACE Virtual Campus program has been imported into the TMIS on-line registration database such that students, supervisors, and training coordinators are able to access TMIS using their Virtual Campus User ID and password. Year-round online access to the PROSPECT program, with current status of program and enrollments:

- Provides flexibility to change and tailor the program to meet organizational needs
- Provides management of students by name rather than by space
- Provides the capability for instructor teams to communicate with students prior to and following training
- Resolves key training issues involving supervisor compliance with prerequisites by providing employees equal access to training
- Eliminates the need for independent PROSPECT survey and validation phases
- Reduces the cost and simplifies PROSPECT program administration.

TMIS on-line registration will be available 24/7 to better meet our customers' training needs. Employees may register online at http://pdsc.usace.army.mil and subsequently online enrollment in specific courses. Supervisors and training coordinators receive notification and approve/disapprove each employee's request. For each approved request, tuition payment information must be provided. As training sessions fill with approved enrollments and new students are placed on standby in the system, course managers and the registrar team will add sessions as necessary to meet customer demand.

At the end of the initial survey period, PDSC course managers will take a snapshot of enrollments and make adjustments in the number of sessions to be held. For example, two partially filled sessions may be consolidated into a single session. If we observe large numbers of students from the same or a closely located organization, course managers will contact the training coordinator regarding an onsite course closer to your geographical location. The results of this snapshot review will be reflected in TMIS, which will remain open for further enrollments, changes, and cancellations throughout the year.

Requests for exclusively onsite training sessions should be submitted to PDSC using the form on Page 1-5. Note that onsite sessions require near normal class sizes, i.e., a course with a class size of 35 students should have an onsite requirement of at least 25 students to effectively utilize required resources. Students enrolled in individual PROSPECT courses should not be included in onsite requests.

Tuition Billing System.

- The FY2004 PROSPECT program continues the "pay as you go" tuition system. This system is derived by each course paying for itself. Each course tuition is calculated by adding instructional costs plus overhead costs and dividing the total by the projected number of students. USACE PDSC staff salaries are included in overhead costs. In most cases, no additional funding is provided.

- Each organization pays tuition for the quotas requested and travel and per diem for their students to attend the course. Provided there are no date and location changes, your organization's student enrollment is a commitment to pay for those spaces allocated. You must obligate funds for training spaces when you request them. The preferred method of payment is via IMPAC card that will be held in suspense and charged only during the actual week of the course. We strongly recommend that your approving training coordinators become IMPAC credit card holders with authority to purchase up to $2,500 minimum. Other acceptable payment methods include DD Form 1556 and MIPRs for onsite sessions.

- Non-Federal Government agencies (state or local) must prepay tuition not later than 30 days prior to the course start date.

Even though our registration system is now a live first-come, first served system, we will use the survey data collected to determine the size of the FY2004 program and its budget requirements. Therefore, it is important that you input as many of your training requirements as possible during this time frame. We suggest you input your Priority 1 students first and, as soon as they are approved, submit your lower priority training requirements.

Course descriptions contain prerequisites required for a specific course. It is the supervisor's responsibility to assure that course enrollees or substitute enrollees meet all listed requirements. Students not meeting the course prerequisites must submit an online request for waiver of a prerequisite to CEHR-P-RG prior to taking the class.

Training coordinators may cancel enrollments online anytime up to 30 days prior to the start date of the class. E-mail confirmation of the cancellation will be provided from the registrar's office. Cancellations received less than 30 days prior to the class start date for which no qualified standby student is available and no-shows will be billed for the applicable tuition. The online TMIS system maintains a standby list for courses and most cancelled quotas can be filled if the cancellation is provided promptly. Your support in this position assists us in maintaining the lowest possible tuition rates and in provided training to as many students as possible. Your credit card will not be charged unless the cancellation is within the 30-day no-cancellation window. In this case, the tuition charge will be processed and the registrar's office will notify you. The DD Form 1556 remains a requirement to document all training. Bills will be processed monthly following completion of training through the USACE Finance Center for all students paying tuition by DD Form 1556.

Any questions regarding the online TMIS Registration program should be referred **through local training coordinators** to:

- Janice Perry, CE Registrar Division (CEHR-P-RG), by telephone at 256-895-7464, by fax at 256-895-7778, or by e-mail at Janice.J.Perry@usace.army.mil.

- Specific course registration information questions should be referred to Sherry Whitaker by telephone number at 256-895-7425, by fax at 256-895-7469, or by e-mail at Sherry.M.Whitaker@HND01.usace.army.mil, or to

- Tonya Parker at telephone number 256-895-7421, by fax at 256-895-7469, or by e-mail at Tonya.Parker@HND01.usace.army.mil.

- Questions regarding billing may be referred to Philip Grames by telephone number at 256-895-5742, by fax at 256-895-7469, or by e-mail at Philip.Grames@HND01.usace.army.mil.

- If you are having technical problems logging into TMIS, receiving your password, or entering your course information , you may contact Steve Johnson by telephone at 256-895-7471 or by e-mail at Steve.Johnson@HND01.usace.army.mil.

This publication and its updates, credit card procedures, the TMIS User Manual, and a Frequently Asked Questions (FAQ) section are viewable and downloadable from the PDSC internet site at http://pdsc.usace.army.mil.

USACE Professional Development Support Center FY___ Training Needs Survey	Date

Installation _____

Address _____

_____

_____

HDQTRS/Command _____

Training Ofcr/POC _____

Telephone No. _____

Course Title	*Control Number*	*Session No.*	*Spaces Req'd.*

Onsite Training Request

To: CEHR-P-RG

From:

Course Title	Ctrl. No.	No. Students	Suggested Dates

FY2004 PROSPECT PROGRAM SCHEDULE

Following is a complete list of courses/sessions being offered in FY2004. The courses are listed alphabetically by short title. Also provided is the course number (as required by Defense Civilian Personnel Data Systems (DCPDS), control number, class size, Continuing Education Units (CEUs) if appropriate, tuition amounts, and proposed locations and dates of each course and session listed. When the location is annotated “TBD” (to be determined) and the dates are blank, this information will be provided as soon as it is available.

Due to the implementation of the Army Standardized Course Numbering System, the course numbers in column one are required for DCPDS. The three-digit control number is required for our local automated tracking system.

The regional concept for scheduling locations of the classroom courses include four regions: Western, Central, Northeastern, and Southeastern. Cities designated within the respective areas as the regional centers are:

WESTERN REGION	CENTRAL REGION	NORTHEASTERN REGION	SOUTHEASTERN REGION
Portland, OR	Dallas/Ft. Worth, TX	Annapolis/Baltimore, MD	Atlanta, GA
Sacramento, CA	Denver, CO	Norfolk/Virginia Beach, VA	Huntsville, AL
Seattle, WA	St. Louis, MO	Washington, DC	Jacksonville, FL
Albuquerque, NM			New Orleans, LA
Phoenix, AZ			

Although most sessions surveyed will be held at these locations, there are a few exceptions: (a) site dependent courses, approximately 1/3 of the program, are excluded from this scheduling requirement (i.e., Vicksburg, Mississippi (WES); Davis, California (HEC); and Duck, North Carolina), and (b) courses in which a large number of applicants are from a city other than a designated regional center, (i.e., Omaha, Nebraska, in the Central Region) may be scheduled in that city.

Priority consideration is given to placement of classes in the Bevill Center in Huntsville, Alabama, the Corps training facility.

For estimating and planning purposes, the schedule includes specific locations for site-dependent courses and classes scheduled in Huntsville, Alabama. Prospective students are encouraged to select the session closest to their assigned duty station. Cooperation of all parties - proponents, instructors, training coordinators, managers, and students - is needed to secure the benefits of lower travel costs through regional scheduling.

TRAINING INFORMATION

1. Laws and Regulations.

   a. The Government Employees Training Act (PL 85-507), known as GETA. A copy of this Act may be obtained from your training coordinator.

   b. The Army Regulation, known as AR 690, Chapter 410. A copy of this regulation may be examined in the personnel division or the training office.

   c. Individual Division/District/Activity Procedures or Regulations. A copy of these regulations may be examined in the personnel division or the training office.

2. Definition of Training.

   a. Training is defined as the process of making available to an employee a planned and coordinated educational program of instruction in various fields which are or will be directly related to the performance of the employee's official duties for the government. This educational program should effectively increase the knowledge, proficiency, ability, skill, and qualifications of the employee in the performance of official duties.

   b. Official duties means the authorized duties which an employee is currently performing or those which he could reasonably be expected to perform in the future. This includes potential duties in a different job or occupation at the same or higher level than one currently held by the employee.

3. Principal Purpose of Training. The principal purpose of training is to provide the knowledges and skills needed:

   a. As a result of agency mission or program changes.

   b. As a result of new technology.

   c. As a result of new work assignments.

   d. To improve present performance.

   e. To meet future staffing needs.

   f. To develop unavailable skills.

   g. To meet the requirements for journeyman status in an apprenticeship program.

   h. To provide orientation for new employees.

   i. To provide adult basic education.

4. Training Facilities. The Government Employees Training Act provides for training of employees through either government or nongovernment facilities. However, training employees through nongovernment facilities is authorized only after the department head determines that adequate training through a government facility is not reasonably available. Further, each department shall provide for training, insofar as practicable, through those government facilities which are under the jurisdiction or control of the department.

5. Length and Types of Training. The Office of Personnel Management considers any training under 120 days to be short term training, while training over 120 days is long term training.

6. Payment of Training Expenses. The Government Employees Training Act authorizes the head of each department:

   a. To pay all or any part of the salary, pay, or compensation (excluding overtime, holiday, and night differential pay) of each employee selected and assigned for training through government or nongovernment facilities for each period of training.

   b. To pay or reimburse the employee for all or any part of the necessary expenses of each training assignment including the necessary costs of travel and per diem in lieu of subsistence; transportation of immediate family, household goods, and personal effects whenever the estimated cost of such transportation and related services is less than the estimated aggregate per diem payments for the period of training; tuition and matriculation fees; library and laboratory services; purchase or rental of books, materials, and supplies; and other services or facilities directly related to the training of the employee.

7. **Limitation on Training in Nongovernment Facilities.**

   a. Man-Year. The Government Employees Training Act provides that the number of man-years of training per department through nongovernment facilities in any fiscal year shall not exceed 1 per cent of the total number of man-years of civilian employment for each department in the same fiscal year.

b. Minimum Continuous Service. No employee having less than 1 year of current, continuous civilian service in the government shall be eligible for training through nongovernment facilities unless the head of the department determines that such training is in the public interest. Exceptions to this requirement include short courses, correspondence courses, apprenticeship training, etc.

c. Maximum Training in a 10-Year Period. In the first 10-year period of the employee's continuous or noncontinuous civilian service in the government following the date of the initial entry into the civilian service of the government and in each 10-year period of service occurring thereafter, the time spent by an employee in training through nongovernment facilities shall not exceed 1 year.

d. Academic Degree Restrictions. GETA states that nothing contained in this Act shall be construed to authorize the selection and assignment of any employee for training through any nongovernment facility under authority of this Act, or the payment or reimbursement by the government of the costs of such training, either:

(1) For the purpose of providing an opportunity to such employee to obtain an academic degree in order to qualify for appointment to a particular position.

(2) Solely for the purpose of providing an opportunity to an employee to obtain one or more academic degrees. This prohibition of training for the sole purpose of attaining a degree is not to be construed as limiting the authority of an agency to assign employees to training in nongovernment facilities when the training is for the purpose of developing those skills, abilities, and knowledges which will best qualify them for the performance of official duties. If, in the accomplishment of this training, an employee receives an academic degree, this may be considered as merely an incidental by-product of the training.

e. Training for Promotion. Training an employee through a nongovernment facility for the purpose of filling a position by promotion is prohibited if there is another employee within the department who has equal ability and suitability and is fully qualified to fill the position and who is available at or within a reasonable distance from the place where the duties of the position are to be performed. Since this requires department-wide consideration, an agency shall request all other agencies to refer employees considered fully qualified and available for the position in the area of consideration. The area of consideration need not be greater than the local commuting area of the position.

f. Continued Service Agreements. Each employee who is selected for training through a nongovernment facility under authority of GETA shall, prior to the actual assignment for training, enter into a written agreement with the government to the effect that:

(1) After the expiration of the period of training the employee will continue in the service of the department for a period of at least equal to three times the length of the period of training unless involuntarily separated from the service of the department.

(2) If the employee is voluntarily separated from the service of the department prior to the expiration of the period for which the employee has agreed to continue in the service of the department after such training, the employee will pay the government the amount of the additional expenses incurred by the government in connection with his training. No employee selected for such training shall be assigned thereto unless he has entered into such agreement.

8. Responsibility for Training.

a. Managers are responsible for training their subordinates. If an employee fails an assignment because of the lack of training, the supervisor is held responsible and not the employee. It is the supervisor's responsibility to ask the superior or available personnel technician for assistance needed. Each activity should encourage employee self-development by providing suitable recognition of improvements in performance that result from training.

b. The basic responsibility for each employee's development rests with the employee. Each employee is encouraged to show initiative in training opportunities and to demonstrate improvements that result from training. When an employee is selected for training, he/she is obligated to give the best thought and effort to that training.

9. Selection for Training.

   a. Each agency must establish procedures necessary to insure that:

      (1) In the selection of employees for training, there is no discrimination because of race, color, religion, sex, national origin, age, or other factors unrelated to the need for training.

      (2) Eligible employees will have a reasonable opportunity for consideration in selection for training which is to result in promotion. Merit promotion procedures must be followed in selecting career or career-conditional employees for training that is given primarily to prepare trainees for advancement and that is required for promotion. These requirements have been established in the interests of fair and equitable treatment of employees as required by the law and principles underlying the Federal Merit Promotion Program.

   b. Factors such as the following may be considered in selecting from among those who might be trained:

      (1) The relative degree of employees' need for training.

      (2) The relative potential of employees for advancement.

      (3) The relative extent to which employees' knowledge, skill, attitudes, or performance are likely to be improved by training.

      (4) The relative ability of employees to pass training to others upon returning to the job.

      (5) The relative length of time and degree to which the agency expects to benefit from the employees' improved knowledge, skills, attitudes, and performance.

      (6) Training opportunities previously afforded employees by the agency.

      (7) The employees' own interest in and efforts to improve their work.

CONTINUING EDUCATION CREDITS

Many state and other certifying and licensing bodies are now requiring continuing education credits in order to maintain licenses and certification. The various continuing education credits are a means through which qualified, noncredit-granting organizations provide their students a standardized system for measuring their courses.

There are no national criteria for most professions. Criteria are generally established by individual states and certifying or licensing bodies. Each state, licensing body, or certifying body makes its own determination as to what the requirements are and which training qualifies. There is no guarantee that a state, certifying body, or licensing body will accept the training for continuing education credit. However, the fact that credits have been earned in accordance with established, stringent criteria created by national professional organizations should positively influence the body's decision.

To aid the professionals who take Proponent Sponsored Engineer Corps Training (PROSPECT) courses to earn required credits while participating in high quality programs taught by practicing professionals, the PROSPECT Program has undergone a rigorous certification/registration process by the professional organizations listed below in order to award the stated types of continuing education credited for select PROSPECT courses:

CEU (Continuing Education Unit): The USACE Professional Development Support Center meets the criteria for Certified Provider established by the Certified Provider Commission of the International Association for Continuing Education and Training, 1620 I Street, NW, Washington, DC 20006.

LU (Learning Unit): The USACE Professional Development Support Center meets the criteria for Registered Provider established by the American Institute of Architects Continuing Education System, 1735 New York Avenue, NW, Washington, DC 20006.

PDH (Professional Development Hour): The USACE Professional Development Support Center meets the criteria for Registered Provider established by the National Society for Professional Engineers, 1420 King Street, Alexandria, VA 22314.

The PROSPECT courses listed on the next page(s) meet the criteria for CEU, LU, and/or PDH. The course description for each of these courses (Managers and Supervisors Training Handbook) also lists the credits that are given for that particular course. Additionally, course completion certificates show the type and number of credits earned. Managers and employees should consider these courses as a source of training to meet continuing education requirements when developing a member's Individual Development Plan.

For additional information about these continuing education and training credits, visit our website at: http://pdsc.usace.army.mil.

COURSES APPROVED FOR CEUS

Title	Crs #	CEUs	LUs	PDHs
A-E Contracting	004	3.1	31	31
Adv Streambank Prot	394	3.2		32
Arch Hardware-QV	003		31	
Budget Training	254	3.3		
CE Contract Law	342	2.8		28
CERCLA/RCRA Process	356	2.1		21
Coastal Ecology	263	2.6		
Coastal Engineering	013	2.7		27
Coastal Planning	011	2.8		28
Concrete QV	021	2.4	24	
Concrete Cost Insp Cer	332		30	
Concrete Technology	022	2.5	25	25
Concrete—QV	731		30	
Const Cont Admin	366	2.5	25	25
Const Quality Mgt	734		24	
Const Quality Mgt	029	1.5	15	15
Construction Safety	215		24	
Contracting Overview	742		20	
Cost-Reimburse Contr	001	2.5		25
CW Programming Process	358	3.1		
Design-Build Construction	425	3.1		
Dist Ofcr Intro	334	6.7		
Dredge Estimating	118	2.8		28
Dredge Fund	333	2.5		25
Dredge: Cont Admin	211	1.8		18
E&D Quality Mgt	208	1.7	17	17
Earthwork—QV	040	2.4		
Ecosys Rest/Plan/Eval	348	3.1		
Elec Exterior Design	090	3.3		33
Elect Secur Sys Des	360	3.2		32
Electrical Design I	373	3.3		33
Electrical Design II	374	3.3		33
Electrical—QV	042	3.0	30	30
Env Impact Assess	169		31	
Env Reg Prac Appl	398	2.2		22
Env Remed Tech	395	2.8		29
Env Remed Tech-Contain	337	1.6		
Env Remed Tech-Insitu	371	1.6		
Env Sampling	225	2.5		25
Environ Laws & Regs	170		31	
Environ Restoration Oview	350	1.1		11
Ergo Compliance	767	1.0		
Est For Const Mods	180	3.4	34	34
Fire Protection	006		31	
Flex Pave Const—QV	050	2.9		29
Flood Cont Chan Des	396	3.2		32
Fund Wetlands	272	2.3		23
General Const—QV	054	3.3	33	33
GIS Introduction	205	2.2		
GPS/GIS Applications	187	2.8		28
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Hist Structures II	163	2.5	25	25
HTRW Const Insp	141	2.7		27
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HVAC Ctrl Sys: O&M	246	3.1		
HVAC Design: Basic	391	3.3		33
HVAC Sys Ta&B-QV	068	3.0		30
HW Manifest/Dot Cert	223	3.4		
Hydro Survey Tech	056	3.3		33
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Landscape—QV	755		16	
MII Advanced	312	2.8	28	28
MII Basic	305		36	
Masonry Const—QV	752		12	
Masonry Struc Des	317		34	
Master Planning	075	2.5	25	25
Mech Systems Comm	327	3.0		30
Mechanical—QV	074	3.2		32
National Elec Code	078	3.0		30
Neg Const Cont Mods	368	2.5	25	25
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New Title:
Floating Plant Safety

Previous Title:
Mechanical Systems Commissioning (#327)
New Title:
HVAC Systems Commissioning

Previous Title:
Quality Verification: Concrete I (#021)
New Title:
Quality Verification: Concrete

Previous Title:
Quality Verification: Concrete II (#332)
New Title:
Concrete Construction Inspector Certification (ACI)

Previous Title:
Quality Verification: Earthwork Construction I (#040)
New Title:
Quality Verification: Earthwork Construction

Previous Title:
Real Time Water Control (#155)
New Title:
Real Time Water Management Modeling With CWMS

PROSPECT PROGRAM SHORT TITLE CHANGES

Previous Title:
Concrete I—QV (#021)
New Title:
Concrete QV

Previous Title:
Concrete II—QV (#332)
New Title:
Concrete Const Inspect Cert (ACI)

Previous Title:
Dredge Safety (#081)
New Title:
Floating Plant Safety

Previous Title:
Mechanical Systems Commissioning (#327)
New Title:
HVAC Systems Commissioning

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Hydraulic Design of Spillways and Outlet Works (#062)

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Ordnance Response Projects at Chemical Warfare Material (CWM) Sites Workshop (#255)

Overview of Environmental Requirements of Corps Projects (#427)

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Planning, Design and Maintenance of Deep Draft Navigation Channels (#346)

Recreation Use Estimation Procedures (#130)

Sedimentation Investigations of Rivers and Reservoirs (#148)

Visual Information Resources and Technology (#388)

PROPONENT SPONSORED ENGINEER CORPS TRAINING (PROSPECT)

GENERAL

The courses in this section are developed to meet unique Corps of Engineers and other government agency training needs. They are taught by Corps employees (parttime instructors) from HQUSACE, divisions, districts, and laboratories or are contracted to universities/private firms/consultants.

CONTACT INFORMATION

Commander
USACE Professional Development Support Center
ATTN: CEHR-P-RG (Registrar)
PO Box 1600
Huntsville, AL 35807-4301
Telephone Number: 256-895-7425/7421
Fax Number: 256-895-7469

COST

Tuition, travel, and per diem costs are all paid by your activity.

STUDENT NOTIFICATION

A Student Information Letter is either electronically transmitted or mailed approximately 60 days before the month in which the class session is to be held. This letter informs the student of hotel/classroom accommodations and any other pertinent course information.

- Identifies Distance Learning Training Courses

1391 PREPARATION

253 **5413901A**
Length: 36 Hours **Tuition: $1050.00**

Purpose. This course provides a logical framework for preparing the DD Form 1391, "Military Construction Project Data," and provides working knowledge on how to verify requirements, prepare the documentation package, review, certify, and program a project to request congressional authorization and appropriation of military construction (MILCON) funds.

Description. Identification and verification of project requirements: (a) project requirement identification and definition; (b) required verification and justification; c) alternative considerations; (d) criteria and standards; and (e) practical exercises (case study). Preparation of DD Form 1391 and related documentation: (1) detailed justification; (2) supplemental data preparation; and (3) project summary. Programming policies and procedures: (a) HQDA/HQUSACE military construction policies; (b) program development cycle for military construction; (c) appropriations and programs that provide for military construction; (d) program formulation and approval; (e) congressional interest; (f) Region/MACOM/MSC/HQUSACE/USAISEC/HQ, IMA/HQDA review, certification and approval process; and (g) how to market a project. Overview of automated applications to support the military construction process.

Prerequisites. (a) Personnel at all levels, (installation, Region, MACOM, USACE district, USACE division, HQUSACE, HQ, IMA, HQDA, OSD), who are assigned to prepare, review, certify, approve, or use (e.g., design project managers) DD Forms 1391 (including personnel from other services, defense agencies and the private sector who are involved in DD Form 1391 Preparation); (b) Occupational series: 0800, 0020, and other personnel involved in DD Form 1391 process; (c) Grade: GS-05 and above. Nominees should have 6 months "on-the-job" training prior to attending this course. A hand-held calculator should be brought to the course.

Session	Location	Date
2004-1	Huntsville, AL	05/17/2004 05/21/2004
2004-2	Atlanta, GA	06/21/2004 06/25/2004

1391 PROCESSOR

252 **5413P01A**
Length: 36 Hours **Tuition: $1100.00**

Purpose. The DD Form 1391 Processor System, which is available in a web-enabled environment, is the means for documenting and submitting military construction project requirements and justification data for funding requests to Congress. Through lectures and practical exercise sessions, this course introduces the student to the capabilities, formats, functions, and usage procedures of the DD Form 1391 Processor System. The DD Form 1391 Processor System allows the user to prepare, edit, query, submit, review, and distribute DD Forms and supporting DD Form 1391 documents electronically using a personal computer.

Description. Topics covered include creating, submitting, reviewing, and editing individual DD Forms 1391 as well as creating directories and custom reports. The custom reporting and directory features can assist an organization in managing its military construction program. All features of the system are covered.

Prerequisites. Nominees must be assigned current positions at Army installation, Region, MACOM, USACE district, USACE division, HQUSACE, HQ, IMA, or HQDA who are involved in preparing and/or reviewing the DD Form 1391 and related documentation associated with the military construction planning, programming, and budgeting process. (Note: Although this course is focused on Army policy, employees of other Services are welcome to attend for information purposes.)

Session	Location	Date
2004-1	Huntsville, AL	11/03/2003 11/07/2003
2004-2	Huntsville, AL	03/22/2004 03/26/2004

A-E CONTRACTING

4 **41AEP01A**
Length: 36 Hours **Tuition: $800.00**
CEUs: 3.1 **PDHs: 31** **LUs: 31**

Purpose. This course is for engineers, architects, technicians, project managers, contract specialists, and other personnel responsible for A-E contract procurement, and/or the supervision and administration of A-E contracts. The course provides a concentrated look at all aspects of A-E contracting, including acquisition planning, public announcement, selection, preproposal activities, negotiations, contract award, administration and closeout.

Description. Through lectures, individual study, and work group activities, this course provides detailed explanations of the laws and regulations affecting the A-E acquisition process, including selection, cost principles, preparation of Government cost estimates, cost or pricing data (truth-in-negotiations), negotiation strategies and techniques, contract award, and contract administration. Also covered are types of A-E contracts, contract clauses, proposal analysis, contractor liability, performance evaluations, and the A-E Contract Administration Support System (ACASS). The students are provided a course manual with essential background information, regulations, examples and exercises.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0340, 0800, 0900, and 1100. (b) Grade: GS-11 or above. Lower grade employees are eligible only if their current duties are directly related to A-E contracting. (c) Employees with current or pending assignments which entail selection, negotiation of and/or administration of A-E contracts are eligible. (d)

Nominees must not have attended similar courses within the past 3 years. (4) Attendees must bring a pocket calculator, and if possible, a laptop computer with EXCEL software and 3-1/2" disk drive.

Session	Location	Date	
2004-1	Virginia Beach, VA	10/27/2003	10/31/2003
2004-2	Huntsville, AL	12/08/2003	12/12/2003
2004-3	Portland, OR	01/12/2004	01/16/2004
2004-4	Galveston, TX	02/23/2004	02/27/2004
2004-5	San Diego, CA	03/22/2004	03/26/2004
2004-6	Jacksonville, FL	04/19/2004	04/23/2004
2004-7	Omaha, NE	06/07/2004	06/11/2004

ACCOUNT MANAGEMENT WKS

449 **15AMW01A**
Length: 16 Hours

Purpose. This workshop focuses on the second and third phase of the Customer Outreach Cycle—account planning and implementaion. It answers the question: "What are the goals and strategies to further the business relationship with an organization's strategic or key customers?"

Description. This workshop session can be offered in either an 8 hour or 16 hour workshop. The objective of the workshop is to develop customer account plan (s). The workshop is designed for onsite presentations at districts and division locations. For more information about anonsite session, please contact Joy Rodriguez, (256) 895-7448.

Prerequisites. This workshop is designed for organizational personnel directly responsible for developing and furthering business relationships with a specific customer.

ADV PAVEMENT DESIGN

357 **35APD01A**
Length: 36 Hours **Tuition: $1970.00**

Purpose. This course integrates advanced theories and applications of computer models in designing and evaluating pavements. Its intention is to analyze the development and rationale underlying the procedures.

Description. The primary topics covered in this course are (a) Theory of California Bearing Ratio Design; (b) Westergaard Rigid Pavement Design; (c) Layered Elastic Theory, Analysis, and Design; (d) Laboratory Test Procedures for Resilient Modulus; (e) Design for Frost Conditions; (f) Frost Susceptibility Evaluation; (g) Back Calculation of Pavement Properties from Nondestructive Testing; (h) Standard Practices in Pavement Design; (i) Influences of Construction, Internal Drainage; (j) Rapid Draining Base; (k) Theory of Overlay Design; (l) Alternate Base and Subbase Material; (m) Hydraulic and Thermal Properties of Soil and Paving Material; and (n) Geometry Design for Airfields. About fifty (50) percent of the sessions involve the demonstration and/or use of microcomputers.

Prerequisites. Nominees must be assigned Occupational Series: Selected 0800. Selected students should be pavement design engineers, facility engineers, and engineers of other MACOMs and federal agencies involved in evaluating pavement. Selected students must have engineering degrees, at least 1 year experience in pavement design, and must have taken the Pavement Design course (#085) or an equivalent graduate level course.

Session	Location	Date	
2004-1	Vicksburg, MS	06/14/2004	06/18/2004

ADV STREAMBANK PROT

394 **35ASP01A**
Length: 36 Hours **Tuition: $2,740.00**
CEUs: 3.2 **PDHs: 32**

Purpose. Building on information presented in the Streambank Erosion and Protection course (#285), this course provides project managers, planners, technicians, engineers, biologists, designers, regulators, and personnel involved in permit review and Section 14, 1135, and 206 projects, with advanced training in the geomorphological aspects of river planform, the hydraulic and geotechnical processes related to specific streambank and bed erosion problems and their effect on the stream system, advanced training and design criteria for recently developed innovative protection techniques, and a short introduction to the benefits and importance of streamside riparian zone restoration.

Description. The majority of this class will be taught in the field. Classroom lectures will cover recently developed protection techniques, such as: Lunkers, Ajax, Newbury rocked riffles, and dormant wilow post method. Utilizing a group of nationally recognized instructors, students will participate in a series of half- and full-day field trips to investigate a wide array of stream types (differing sizes, slopes, bed materials) within a 150 mile radius of Vicksburg, MS. Videos regarding erosion and stabilization will be viewed during the bus trips. Over 25 streamside, interactive mini-lectures will be presented in the field, with subjects to include: identifying dominant hydraulic, geotechnical, and morphological processes, analyzing trees and roots, transitions, bed gradation sampling techniques, vegetative roughness analysis, the role of Large Woody Debris in bank protection (hydraulic, geotechnical, and environmental considerations), where is vegetation appropriate, and vegetative secession. The long-term performance (hydraulic, geotechnical, and environmental) and effectiveness of several grade control and streambank protection projects will be analyzed. Some projects are over 20 years old. Some failed sites will be reviewed. Repair or redesign and replacement of these projects will be discussed. Using advanced geomorphic analyses techniques, several severe bank erosion and bed degradation sites will be reviewed from both a local, and system-wide perspective. For these sites, project goals will be formulated and conceptual designs developed. In-class discussion will focus on further review of com-

pleted projects, failures, and erosion problems studied during the field trips. Students are encouraged to give a brief presentation of a current project for group discussion and review.

LEARNING OBJECTIVES: At the conclusion of this course the student will be able to develop a set of project goals, conduct a field analysis of a local or system-wide stream instability problems, consider and analyze several alternative bank and grade protection treatments, develop a site-specific comprehensive treatment plan taking into consideration the long-term effects of the stream on the project, long-term project performance, environmental ramifications, cost effectiveness, both local and overall effects of the project on the stream system, and develop a long-term monitoring, maintenance, and repair plan for the project.

Prerequisites. Within the last five years the student must have completed the Streambank Erosion and Protection course (#285). Federal nominees must be assigned (a) Occupational Series: Selected 0000-0100, 0400, 0800, 1300, and (b) Grade GS-07 or above.

SPECIAL INSTRUCTIONS: A majority of class time will be spent on a series of field trips covering approximately 3 full days of class time investigating streams within a large portion of the state of Mississippi. Students will be required to climb streambanks and wade approximately one mile of stream over a period of 2 to 3 hours. Needed field equipment will be provided by WES. Students should bring appropriate field clothes for 4 days in the field, extra socks, a windbreaker, and rain gear.

Session	Location	Date	
2004-1	Grenada, MS	04/05/2004	04/09/2004

ADVANCED HEC-HMS

369 **35AHC01A**
Length: 36 Hours **Tuition: $1,800.00**

Purpose. This course provides instructions on advanced applications of the Corps' Hydrologic Modeling System, HEC-HMS. Emphasis is placed on capabilities not covered in the Basic HEC-HMS class and capabilities not contained in the predecessor HEC-1 software. The new hydrologic simulation techniques covered are: continuous simulation and spatially distributed, gridded runoff calculations. The basis for these new techniques will be provided and reinforced with practical hands-on workshops.

Description. The course covers new hydrologic methods (continuous simulation and gridded runoff calcuation) not included in the Basic HEC-HMS or previous HEC-1 courses. Students will learn basic concepts and theories in lectures and apply them to practical hydrologic engineering problems in workshops. The theoretical basis for soil moisture accounting and how it is represented in HEC-HMS will emphasize practical means for identifying and calibrating rapid, moderate, and slow responding components of various watershed moisture storages. Another new capability is the spatially distributed runoff computation via a gridded representation of the watershed. Creation of a gridded watershed from digital terrain models using HEC-GeoHMS will be described and used in workshops. A new gridded snow accumulation and melt capability will also be used. The ModClark unit graph method will be used to transmit gridded rainfall and snowmelt excess (from radar rainfall and GIS solid infiltration) to the basin outlet. Improved methods for representing hydraulic structures in a hydrologic model will also be presented.

Prerequisites. Nominees must have a basic understanding of hydrologic processes and how they are represented in HEC-HMS. Students should have taken the Basic HEC-HMS course (#178) or had equivalent experience. Basic HEC-HMS navigation skills will not be taught in this class. Nominees must be assigned (a) Occupational Series: Selected 0800 and 1300; (b) Grade: GS-09 or above.

Session	Location	Date	
2004-1	Davis, CA	05/17/2004	05/21/2004

ADVANCED HEC-RAS

67 **35AH201A**
Length: 36 Hours **Tuition: $2,060.00**

Purpose. This is an advanced course in applying computer program HEC-RAS. The course provides participants with the knowledge to effectively use computer program HEC-RAS to analyze difficult hydraulic conditions in natural and constructed channels.

Description. Topics include applications and limitations of one-dimensional models, effective use of HEC-RAS bridge and culvert analysis techniques, supercritical and mixed flow, use of the channel modification option to analyze proposed channel modifications, divided flow analysis, analysis of gated structures, modeling drop structures, and incorporating spatially referenced data into HEC-RAS via the GeoRAS ArcView extension.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0800 and 1300; (b) Grade: GS-9 or above. Students must be experienced engineers who have attended Flood Plain Hydrology or Steady Water Surface Profile Computation using HEC-RAS (Basic) (#114) courses. Participants must be in positions where they are currently engaged in using HEC-RAS in hydraulic investigations.

Session	Location	Date	
2004-1	Davis, CA	10/20/2003	10/24/2003

APPL OF ENGR GEOLOGY

251 **35AEG01A**
Length: 36 Hours **Tuition: $2,430.00**

Purpose. This course presents a combined application of engineering geology, geophysics, and rock mechan-

ics. The course is recommended for engineering geologists, design engineers, and construction engineers.

Description. Lectures, demonstrations, and reading assignments will cover: the history and evolution of Engineering Geology; Site Investigations; Basic Rock Mechanics; Rock Excavation; Foundation Treatment; Rock Reinforcement; Underground Construction; Ground Water; and Hazardous/Toxic/Radioactive Waste.

Prerequisites. Nominees should be assigned: Occupational Series: Selected 0800, 0810, 1310, and 1350; Grade: GS-07 or above and project management personnel.

Session	Location	Date	
2004-1	Huntsville, AL	07/12/2004	07/16/2004

ARCH HARDWARE-QV

3 **35AHQ01A**
Length: 36 Hours **Tuition: $1530.00**
LUs: 31

Purpose. This course develops new skills oriented to the quality verification of hardware used in building construction and updates the student's knowledge of current industry practices and changes in specifications. It also provides training that results in a more effective quality assurance.

Description. This course presents the fundamentals of the industry including hardware materials and finishes-their purpose, use, and application; basic information covering all architectural hardware products, terminology, and types of doors and frames; and the fundamentals of hardware schedules, preparation, and use. Emphasis is placed on how to interpret a hardware schedule for installation purposes and field use, as well as an analysis of a hardware schedule submitted to the designer for approval.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0800; (b) Grade: GS-05 or above; (c) current or projected assignment with responsibility for providing quality verification of hardware, specifying hardware, or reviewing hardware submittals from contractors for approval. Student must not have attended this or a similar course within the past 5 years.

Notes. This course contains requirements which are mandatory for course completion and may require an estimated 3 hours of overtime. It is your responsibility to bring this to the attention of your supervisor so that an overtime request/determination can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

Session	Location	Date	
2004-1	DFW, TX	06/14/2004	06/18/2004

BAS SPILL RESP CW FACILITIES

772
Length: Awareness Level: 2 Hours
Operations Level: 8 Hours
Video Run Time: 1.2 Hours **Tuition: $600.00**

Purpose. This course provides training for all personnel who may be in a position to respond to spills and/or leaks of hazardous substances. It is intended to provide first responders at the awareness and operations levels with the skills and knowledge needed to protect their safety and health when confronted with a release of a hazardous substance. Requirement for this training is established in the Code of Federal Regulations (CFR); specifically 29 CFR 1910-120, paragraph q.

Description. The exportable training is visually-based, student-active, and self-contained. The course package consists of a Facilitator's Guide, Student Study Guide, and video content carrier. It presents the instructional materials in short increments via videocassette and the student study guide. Modules and submodules are short to enhance learning.

Prerequisites. Modules/Submodules. (1) First Responder Awareness Level: (a) Recognizing a Release and (b) Initiating a Response; (2) First Responder Operations Level: (a) Recognizing Hazards for a Release, (b) Protecting Self, and (c) Protecting Nearby Persons, Property, and Environment.

BASIC FINANCIAL MGT-WBT

800
Length: 8 Hours
Web-Based: Self-Paced **Tuition: $35.00**

Purpose. This course provides an overview of the various regulatory, policy, and statutes that govern the day-to-day financial management decisions.

Description. Modules of instruction include authorization and appropriations; statutory constraints on use of funds; funds management,a nd legislative initiatives in financial management and the CFO Act.

Prerequisites. Students should be general workers, supervisors, and management personnel who are directly involved with the day-to-day financial management responsibilities.

BASIC HEC-HMS

178 **35HAF01A**
Length: 36 Hours **Tuition: $1,930.00**

Purpose. Participants will acquire knowledge and experience in simulating rainfall-runoff processes using the new Hydrologic Modeling System (HEC-HMS) as a

tool. Applications include floodplain management, flood forecasting, and water resource planning.

Description. The course covers basic hydrologic engineering techniques for rainfall-runoff analysis. Topics include: basin average rainfall and loss rate determination, unit hydrograph techniques, streamflow routing, and methods for modeling runoff throughout a watershed composed of multiple subbasins and river reaches. Workshops will provide hands-on experience in applying these techniques using the HEC-HMS computer program. HEC-HMS is the next-generation successor to the HEC-1, Flood Hydrograph Package. HEC-HMS employs a graphical user interface to provide capabilities to create models, perform simulations, and review results. The program includes new capabilities for spatially distributed runoff and continuous simulation, and operates on a Windows PC or SUN X-window computer.

Prerequisites. Nominees should be assigned (a) Occupational Series: 0400, 0800, and 1300; (b) Grade: GS-07, or above. Course nominees should be in a position where they are, or will be within the next year, conducting flood studies involving rainfall-runoff modeling. Familiarity with Windows-based computer systems is desirable.

Session	Location	Date	
2004-1	Davis, CA	01/12/2004	01/16/2004

BASIC WELDING—QV

743 **35WLQ01A**
Length: 24 Hours
Video Run Time: 1.8 Hours **Tuition: $900.00**

Purpose. This training provides participants with the basic knowledge to interpret the various methods and techniques employed in weldments and to assure the quality of welds.

Description. The training materials include one 1/2" videotape cassette, a Facilitator's Guide (FG), and a Student Study Guide (SSG). The SSG includes the videotape narration, task-active exercises and answers (pretest and posttest), sample forms, and a glossary.

Modules. The seven modules of instruction presented in the course are (a) Welding Quality Assurance Requirements and Duties; (b) Welding Specifications and Codes; (c) Basic Welding; (d) Symbols, Welding, and Nondestructive (NDT) Testing; (e) Welding Procedure Specifications, Qualifications, and Welding Performance Qualifications; (f) Weld Testing and Defects; and (g) Welding Safety.

Prerequisites. Nominees should be assigned (a) Occupational Series: 0802, 0809, and selected 0800; (b) Grade: GS-05 through GS-11. Students should have current or projected assignments having welding quality assurance responsibilities. Nominees should have completed the Construction Quality Management (classroom or exportable) course.

BIODIVERSITY

961 **33BDY01A**

Purpose. Web-based. Assists DOD natural resources personnel in managing installations for the preservation, restoration, enhancement, and maintenance of biodiversity. The course is for both military and civilian natural resources policy makers at all levels. The course is accessible over the Internet, and is self-paced and modular in format. There are four subject matter modules with each related to, but independent of the others: Introduction to Managing for Biodiversity on Military Lands; Putting Biodiversity Theory Into Practice; Developing A Biodiversity Management Action Plan (Biomap); and Monitoring and Measuring Biodiversity.

Description. An individual can access the modules in any order deemed most relevant to their needs. Each module is the equivalent of one hour of self-pace instruction in front of a terminal. Each module of instruction is subdivided into three modules representing approximately 15 minutes each of self-paced instruction. The submodules also include a 5-minute multiple choice test at the end of each session. Consequently, a submodule unit of instruction can represent approximatel 20 minutes spent before a terminal. Completion of 3 submodue units of instruction equals the completion of a module and will be the equivalent of approximately 1-hour of instruction. These calculations of time spent before a terminal do not include possible time spent on links to other web sites or communications with others accessing e course on other installations. Completion of all modules will signal completion of the course. Web features include links to other web sites, communications between individuals taking the course at different installations, registration information that includes identification of the service represented by the individual taking the course, graphics, video, photos, and other multimedia enhancements. A pre-test and post-test are administered for each module.

BLASTING SAFETY *NEW*

310
Length: 32 Hours **Tuition: $1430.00**

Purpose. This course is designed for USACE construction personnel to include Engineers, Quality Assurance Representatives, Safety and Occupational Health professionals, Program Managers and other individuals involved with explosive blasting operations. This course provides a concentrated overview of all aspects of transporting, storing and using high explosives for typical construction operations and includes a detailed study of blasting requirements found in EM 385-1-1, Title 29 CFR 1910 and 1926, and other consensus standards regulating explosives and blasting operations.

Description. Through lectures, individual studies, and work-group activities, this course provides a detailed review of the theory and use of commercial explosives as it relates to Surface Blasting, Underground Blasting, Controlling Blast Vibration and Airblast, as well as associated safety requirements.

Specific topics covered in this class include the following topics: types of explosives, energy release approximations, explosives properties, types of explosives, priming and boostering, initiation systems, rock breakage mechanism, blast-hole timing, surface blast design, production blast, sinking cuts, trenching, presplitting, blast vibrations and airblast, geologic effects on blasting and blasting safety in storage and transportation.

The control of blast vibration and airblast training segment will cover vibration and seismic, waves, seismic waves, vibration instrumentation, vibration records and interpretations, factors affecting vibration, vibration control, ground calibration vibration standards, long term vibration and fatigue, vibration effects, blasting standard for non-residential structures, blasting near concrete structures, air blast monitoring and control, glass breakage, regions of potential damage for air blast, procedures to avoid air blast focusing, pre-blast surveys, and effects of blasting on water wells and aquifers.

Prerequisites. Nominees must be assigned to Occupational Series: 0340; 0800; 0018; 0803; 0690; and pertinent WG series at all grade levels.

Session	Location	Date	
2004-1	Huntsville, AL	08/09/2004	08/13/2004

BOAT OPR LICENSE EXM

172 **33BOL01A**
Length: 64 Hours **Tuition: $3,930.00**

Purpose. This course trains, tests, and licenses individuals as motor boat operators and license examiners for the Corps of Engineers.

Description. Lectures, demonstrations, reading assignments, and practical exercises cover the areas listed below and enable students to perform duties as outlined in Engineer Regulation 385-1-91. Specific areas to be covered include (a) USACE Boat Licensing Policy; (b) required safety and normal equipment, and equipment maintenance; (c) boat orientation: (1) starting procedures, (2) checking equipment, (3) getting underway, and (4) refueling procedures; (d) trailers and trailer maintenance; (e) Marlinspike Seamanship; (f) navigation and rules of the road; (g) fire suppression; (h) course familiarization; (i) emergency procedures: (1) reaching, throwing, (2) self rescue, H.E.L.P., and huddle, (3) overboard drill, roll aboard; (j) boat operation; (k) secure operation; (l) repetitive boat exercises: (1) serpentine course, (2) transition serpentine, (3) avoidance course, (4) docking; (m) Concurrent Boat Exercise (Practical): (1) trailering, (2) launching and retrieving boats, (3) alongside maneuvering and boarding, (4) towing boats, (5) emergency procedures; (n) Boating Skills (Practical) and; (o) Safety Manual (EM 385-1-1) Review.

Prerequisites. Students should have been designated motor boat training duties at their facility. Individuals attending this course must be (a) able to swim in a Personal Flotation Device (PFD) for 100 yards; (b) an experienced motor boat operator; and (c) designated to train local motor boat operators in boating skills.

Session	Location	Date	
2004-1	Glynco, GA	08/17/2004	08/26/2004

BUDGET TRAINING

254 **42BTC01A**
Length: 36 Hours **Tuition: $1,120.00**
CEUs: 3.3

Purpose. This course is targeted for those civilian and military employees of the Corps of Engineers who work directly within the financial management arena. It provides a framework and knowledge of the federal budget process with specialized emphasis on policies and procedures of the Corps of Engineers. The objective is to provide a uniform understanding of Corps budgeting so that operations are improved/streamlined at all Corps organizational levels.

Description. The course describes program and budget activities at the HQUSACE, MSC, District, FOA, and Laboratory levels, and how these activities interrelate with those at Army, DOD, OMB, and the Congress. The curriculum is structured around the formulation and execution of an activity's operating budget. The material is presented through lectures and practical exercises covering various budgeting processes and budget-related issues. Major topics/areas include (a) operating budgets; (b) military and civil works programs; (c) military and civil works budgeting; (d) budget execution; (e) statutory and administrative limitations; and (f) special subjects, such as mobilization and CEFMS applications.

Prerequisites. Restricted to full time Corps members in the Grade of GS-11 (0-3) and higher who have significant financial management responsibilities in their commands. Any waiver to these prerequisites must be approved by the student's local Chief of Resource Management prior to requesting a space allocation.

Session	Location	Date	
2004-1	Huntsville, AL	04/05/2004	04/09/2004
2004-2	Jacksonville, FL	05/10/2004	05/14/2004
2004-3	Omaha, NE	07/26/2004	07/30/2004
2004-4	Portland, OR	07/12/2004	07/16/2004

BUSINESS GRAPHICS

758 **51BUG01A**
Length: 4 Hours
Video Run Time: 58 Minutes **Tuition: $500.00**

Purpose. This course provides employees with skills to improve visual information products.

Description. Modules of instruction include (a) Organizing Information to be Presented, (b) Identifying the Most Effective Mix of Visual Products, (c) Identifying Resource Requirements, (d) Identifying Effective Presentation Graphics Techniques, (e) Identifying Effective Desktop Publishing Techniques, and (f) Identifying Visual Standards Requirements.

Prerequisites. Nominees should be those persons who use or produce graphics and publications.

CE COMMANDERS COURSE

120 **15CCC01A**
Length: 140 Hours **Tuition: $4,260.00**

Purpose. The USACE Command Preparation Program orients newly assigned district commanders and deputy division/district commanders to some of the unique aspects of command in USACE organizations. The program also provides an understanding and awareness of a broad range of topics related to executing the USACE mission and serving its customers. Consisting of two subcourses, PCC and the C ommanders' Course, the USACE Command Preparation Program is intended to establish both the doctrinal framework for district operations, as well as specific tactics, techniques, and procedures for success.

Description. District Engineer Pre-Command Course (PCC), "District Command - Essential Facts and Knowledge," is 4 1/2 days long. It provides the district commander designees with the tools, knowledge, and fundamentals to assume command of their district. They will learn key concepts of the Project Management Business Process, Resource Management, and Human Resources issues. In addition to hearing the Chief's command philosophy, they will meet with the Directors of Civil Works and Military Programs. The HQ staff will be introduced, as well. The course starts the first Monday after the last Senior Service College graduation and is mandatory for all District Engineer designees assuming command later in the year.

USACE Commanders' Course, "District Command - Tactics, Techniques, and Procedures" is 8 days long. It is mandatory for all recently assigned District Engineers and recommended for all division and district deputy commanders. It builds upon the introductions in PCC, allowing the students to fully explore the details of command of USACE organizations. Led by serving District Engineers and subject matter experts, the students use lecture and case studies to gain deeper understanding of USACE processes and doctrine. The course concludes with an orientation and tour demonstrating the capabilities of the Topographic Engineering Center. This Phase takes place in October, immediately before the Fall District Commanders' Conference.

Prerequisites. Designated and recently assigned district commanders and deputy district/division commanders. Commanders are nominated by the Military Personnel Division of HQUSACE (CEHR-M). Deputy commanders are nominated by their district/division. Nominations for deputy commanders for Phase II should be sent to the Chief, USACE Professional Development Support Center, ATTN: CEHR-P-TO, P.O. Box 1600, Huntsville, Alabama 35807-4301.

Session	Location	Date
2004-1	Ft. Belvoir, VA	10/20/2003 10/30/2003

CE CONTRACT LAW

342 **37ECL01A**
Length: 36 Hours **Tuition: $1,750.00**
CEUs: 2.8 **PDHs: 28**

Purpose. This course is primarily intended to instruct USACE attorneys in the basic legal principles and procedures related to Corps of Engineers construction contracting. Attendees will be able to provide competent legal advice on contractual matters and to process contract actions such as bid protests, mistakes-in-bid, and claims and appeals.

Description. Through the use of lectures, workshops, and case study sessions, this course primarily addresses those aspects of construction contract law essential to successfully accomplishing the Corps' contract mission. This course is designed for training Corps of Engineers attorneys, acquisition personnel, and project managers.

Prerequisites. Nominees must be assigned (a) Occupational series: 905, 1102, or 340; (b) Grade: GS-09 or above; (c) Other: This course is recommended for attendees that have had basic government procurement law training.

Session	Location	Date
2004-1	Huntsville, AL	05/03/2004 05/07/2004

CERCLA/RCRA PROCESS

356 **33HEL01A**
Length: 28 Hours **Tuition: $1,310.00**
CEUs: 2.1 **PDHs: 21**

Purpose. This course trains personnel on the Comprehensive, Environmental Response, Compensation and Liability Act (CERCLA) hazardous substance response process and the Resource Conservation and Recovery Act (RCRA) corrective action process as it relates to USACE programs such as the Installation Restoration

Program (IRP), the Superfund Program, the Formerly Used Defense Sites (FUDS) Program, the Base Realignment and Closure (BRAC) Program, and the Formerly Used Sites Remedial Action Program (FUSRAP), and the Civil Works Hazardous, Toxic, and Radioactive Waste (HTRW) remediation actions.

Description. This course has been developed by in-house USACE staff and focuses on the regulatory requirements for cleaning up HTRW at CERCLA and RCRA sites under various programs. It covers the CERCLA process as outlined by Subpart E of the National Contingency Plan and the RCRA corrective action process as implemented via permit requirements and regulatory provisions. CERCLA topics addressed include preliminary assessments, site inspections, removal site evaluations, engineering evaluations/cost analyses, removal actions, remedial investigations, feasibility studies, proposed plans, records of decision, remedial design and construction, and public participation requirements. RCRA topics include RCRA Facility Assessments, RCRA Facility Investigations, Interim/Stablization Measures, Corrective Measures Studies, Corrective Measures Implementation, corrective action management units, temporary units, staging piles, and use of remedial action plans in lieu of traditional RCRA permits.

In addition to the CERCLA/RCRA course, individual two-day workshops on the CERCLA or RCRA process can be tailored to meet your individual district's needs. Whether you are interested in an onsite CERCLA/RCRA process course or a separate course featuring either the CERCLA or the RCRA process, contact the USACE Professional Development Support Center, Huntsville, AL.

Prerequisites. Nominees must have at least one year experience in the hazardous, toxic, or radioactive waste program. Priority will be given to personnel directly involved in the USACE HTRW program in the following occupational series: 800 series Engineers (0801, 0819, 0830, 0893, 0896, etc); Environmental Protection Specialist (0028); Program Managers, Engineering and Science (0340); Industrial Hygienists (0690); Geologists/hydrologist (1350, 1315); and Chemists (1320).

Session	Location	Date	
2004-1	Orlando, FL	06/08/2004	06/11/2004

CIVIL DESIGN/PLNG

218 **35CDP01A**
Length: 36 Hours **Tuition: $1,500.00**

Purpose. This course focuses on the Corps of Engineers (CE) Civil Works project development process. It provides a general understanding of the broad-range of engineering studies and sensitive engineering issues that impact and influence project formulation, the reconnaissance and feasibility planning phase, as well as the preconstruction engineering and design (PED) phase. The course also covers the processes involved in accomplishing studies (e.g. independent technical review, policy review, quality control, value engineering), and tools (World Wide Web, mapping, risk based analysis, Project Management Plans, etc.). It discusses the role of the designer and planner in the context of the Project Delivery Team. It is intended to reach newly assigned professional scientists/engineers within the engineering and planning functions of the Corps or those who are new to the Civil Works process. Individuals not working with, or planning to work with, the CE Civil Works process may receive less benefit from this class.

Description. The objective of this course is to develop knowledge, skills, and aptitudes regarding the policies, procedures, tools, and techniques for the planning and design of a Corps of Engineers Civil Works engineering project. After completing this course, the student should be able to more effectively execute and coordinate a compex, multi-disciplinary CE Civil Works project. Topics include organization and development of resources required to execute the process, policy guidance, and various sensitive design concerns within the planning process, engineering overview, geotechnical, electrical/mechanical, hydrology and hydraulics, and structural engineering studies as well as geographical information systems. Emphasis is placed on the Independent Technical Review process, and successful navigation through the policy review process. This course tracks the Corps of Engineers Project Management Business Process from the authorization of the first study to the completion of construction. The course was developed for CE Civil Works personnel and may be of reduced value to personnel from other agencies.

Prerequisites. Nominees should be on, or have a potential assignment to a Civil Works study team in the Planning or Engineering phases and have functional responsibilities within the Planning or Engineering divisions; (a) Occupational Series: All series; and (b) Grade: GS-07 through GS-13. Individuals not working with, or planning to work with, the Corps of Engineers Civil Works process may receive less benefit from this class.

Session	Location	Date	
2004-1	Seattle, WA	06/21/2004	06/25/2004

CIVIL WORKS ORIENT

86 **35PWR01A**
Length: 36 Hours **Tuition: $1,380.00**

Purpose. This course provides the student with a basic understanding of the Corps of Engineers civil works program and the project development process. It is designed for Corps employees who are relatively new to civil works or individuals who require an overall understanding of and the procedural stages involved in the development of civil works projects.

Description. Topics will be presented and discussed relating to the Civil Works process, including: over-

views of the Corps missions, programs and organizational structure; legislative and review processes; study and project cost-sharing; program budgeting and funding; environmental compliance and HTRW considerations; public involvement; partnering and cooperation with non-Federal sponsors; and new trends and developments. The student will learn the entire Civil Works process from the problem identification to project implementation. Various individual, group, and class exercises; role-plays of Corps-sponsor meetings; and discussions are used throughout the course to help students understand the process.

Prerequisites. Nominees must be involved in or closely support civil works planning, project management, or programs management and must be assigned (a) Occupational Series: Selected 0020, 0100, 0300, 0400, 0800, 0900, 1100, and 1300 series or others such as public affairs officers, real estate, or counsel that support the development process; (b) Grade: GS-05 or above.

Session	Location	Date	
2004-1	Huntsville, AL	03/08/2004	03/12/2004
2004-2	Sacramento, CA	04/19/2004	04/23/2004
2004-3	Boston, MA	05/10/2004	05/14/2004
2004-4	Tampa, FL	06/21/2004	06/25/2004
2004-5	Portland, OR	07/19/2004	07/23/2004

CLEAN AIR ACT WORKSHOP

443 **33CAW01A**
Length: 20 Hours **Tuition: $810.00**

Purpose. This workshop has been designed to introduce the student to the major programs of the Clean Air Act (CAA) and associated environmental compliance requirements. In addition to learning basic CAA regulatory requirements, students will also be taught to identify when a CAA construction or operating permit may be required.

Description. During the course of this workshop, students will gain a better understanding of the regulatory requirements pertaining to the major programs of the CAA including National Ambient Air Quality Standards, conformity of federal actions, New Source Review and Prevention of Significant Deterioration, hazardous air pollutant regulations including NESHAP and MACT standards, operating permits, air emission inventories, the use of emission factors, and the regulation of ozone depleting substances. Application of the standards to typical DoD projects will be addressed, including construction operations and remedial actions. Practical exercises will be performed throughout the workshop to provide the student with hands-on experience.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0020, 0100, 0400, 0690, 0800, 0900, and 1300 or by demonstration of special needs related to job responsibilities; (b) Grade: GS-07 or above.

Session	Location	Date	
2004-1	Denver, CO	07/07/2004	07/09/2004

CLIENT OUTREACH WORKSHOP

442 **15COW01A**
Length: 16 Hours

Purpose. This workshop gives Corps personnel an introduction to business development practices. The workshop provides insight into the use of customer outreach applicable to all mission areas throughout the Corps. The key objectives include strategic outreach planning, customer account development, developing written plans, customer contact skills, and evaluation of the total customer outreach process. Current USACE outreach initiatives are summarized.

Description. The course provides an overview of outreach concepts and an introduction to specific marketing tools and techniques via classroom exercises. These concepts include strategic planning to identify district/division business development goals, customer account planning tools and customer-focused presentation and contact skills. The workshop is designed for onsite presentation at district and division locations. For more information about an on site session, please contact Joy Rodriguez at (256) 895-7448.

Prerequisites. Nominees may be assigned to any occupational series at Grade Level GS-09 and above. This workshop is of value to all Corps personnel engaged in outreach and business development with external customers. All students should preview the Outreach Tutorial located at www.usace.army.mil/essc/intra/customer/cotutor.

COASTAL ECOLOGY

263 **33COE01A**
Length: 36 Hours **Tuition: $2,800.00**
CEUs: 2.6

Purpose. This course provides Corps of Engineer personnel with state-of-the-art knowledge and technology in marine and coastal ecology. Students are given an overview of the latest scientific and analytical techniques in the field of coast ecology and related sciences.

Description. Through a series of lectures, practical exercises, and field trips, students are introduced to the basic concepts of marine/estuarine ecology (including benthic ecosystems, fisheries, coastal marsh and seagrass ecology), sensitive resources, experimental design, and current marine ecological techniques such as the Benthic Resources Assessment Techniques (BRAT) and the Sediment Profiling (SP) camera. The role and importance of coastal ecosystems will be discussed. Temperate, subtropical, and tropical ecosystems will be covered for the Gulf, Atlantic, and Pacific coasts.

Prerequisites. Nominees must be assigned: (a) Occupational series: 0020, 0400s, 0800s, and 1300s; (b) Grade: GS-09 and above; and (c) This course is meant primarily for engineers, scientists, and technicians with planning, operations, or regulatory duty assignments involving marine and coastal systems.

SPECIAL INSTRUCTIONS: This course involves extensive "hands-on" field exercises. Therefore, students should be prepared to work in a wet and muddy environment.

Session	Location	Date
2004-1	Monterey, CA	03/15/2004 03/19/2004

COASTAL ENGINEERING

13 **35CE201A**
Length: 60 Hours **Tuition: $2,440.00**
CEUs: 2.7 **PDHs: 27**

Purpose. This course provides formal and hands-on training in the fundamental processes, and functional and structural design elements required to work on coastal engineering projects. The emphasis is on learning and applying the basics of shore protection and navigation structure planning, design, rehabilitation, and maintenance. Attendees are introduced to coastal project and element alternatives, functions, and design procedures for structural and non-structural solutions. This course is intended primarily for planning, engineering, and construction or operations personnel needing state-of-the-art procedures and techniques for working with coastal projects. Course content will emphasize up-to-date technology and analysis tools specific to the needs of both newly assigned and experienced practicing coastal engineers.

Description. Basic scientific principles and computational procedures presented in the "Shore Protection Manual" (SPM) and in completed portions of the "Coastal Engineering Manual" (CEM) will serve as the formal instructional foundation. Attendees will become familiar with the use of these same references plus the Automated Coastal Engineering Systems (ACES) and other numerical computational tools and models, physical models, and field data collection through lecture, case studies, and classroom exercises. Access to and use of USACE and other coastal processes and map data bases will be explored. These materials will be illustrated by the instructors' examples and through the hands-on use of calculator and PC scale computational technology. Attendees will be assigned to work on a team coastal engineering problem for presentation to the rest of the class. Attendees will become familiar with (1) coastal project development and structure design including navigation breakwaters and jetties, shore-connected and detached breakwaters, groins, seawalls, and revetments, and (2) the planning and design of beachfills, offshore berms, physical aspects of coastal wetland restoration, and dredging and material disposal management, and channel design. Attendees will learn the functional and structural design characteristics of different types of coastal structures and how to evaluate non-structural alternatives. Topics discussed are (a) wave structure interaction (i.e., wave run-up, overtopping, reflection and transmission); (b) selection of design parameters; (c) design and use of coastal armoring; (d) design and use of erosion control techniques; (e) design and use of navigation and harbor structures; (f) beach fill design and other sediment management projects; and (g) microcomputer computational tools.

Prerequisites. Engineers or scientists who have been assigned to coastal projects and who need in-depth knowledge on coastal planning, project design, and operational practices. Attendees should have some experience or background in coastal processes having taken either the PROSPECT Coastal Planning course (#011) or an equivalent university level coastal course. Grade: GS-09 or above.

Session	Location	Date
2004-1	Vicksburg, MS	02/03/2004 02/12/2004

COASTAL PLANNING

11 **35CEN01A**
Length: 36 Hours **Tuition: $2,250.00**
CEUs: 2.8 **PDHs: 28**

Purpose. This course provides a formal introduction to coastal project related technological and management issues including hydrodynamic and sediment transport processes, geological framework and evolution, and problems and solutions especially as they relate to the Corps of Engineers coastal planning and environmental management mission. It broadens the technological base of planners, engineers, managers, environmentalists, geologists, regulatory, and others involved in studies and projects of the coastal zone.

Description. Major topics to be covered include: hydrodynamics, littoral sediment transport processes, geomorphology of lakeshores and sea coasts, sediment budgets, coastal problem identification and analysis of alternative solutions, impact prediction and monitoring, coastal data collection, and the basic issues of coastal project planning and design. Unique coastal settings, regional management, stewardship and mitigative practices will be emphasized. The mission and authorities of the Corps of Engineers, particularly as they relate to other Federal agencies and state coastal zone management, will be explored.

Attendees will become familiar with the "Shore Protection Manual" (SPM) and with completed portion of the "Coastal Engineering Manual" (CEM) as basic reference material and will also be introduced to the Automated Coastal Engineering Systems (ACES) and other computational resources. Issues and principles will be illustrated through the instructors' examples, case studies, and a field trip to select sites on the North Carolina Outer Banks. The training site is the USACE Coastal Field Research Facilities and select elements of the course are designed to take advantage of this venue.

Prerequisites. Nominees should be assigned as engineers, geologists, physical scientists, environmentalists, biologists, or planners who have review, planning, or design responsibilities for coastal shore protection, navigation, and environmental projects. Grade: GS-09 or above.

SPECIAL INSTRUCTIONS. This course will include a field trip and attendees should be prepared for walking across irregular terrain regardless of weather.

Session	Location	Date
2004-1	Duck, NC	04/26/2004 04/30/2004

COMPUTER APPL/ENGR

19 **54CAE01A**
Length: 36 Hours **Tuition: $2,350.00**

Purpose. This course informs and instructs engineers and engineering managers in the use of computer-aided engineering design techniques and applications available within the Corps of Engineers. A strong emphasis is placed on "hands-on" computer-aided engineering design training by the use of workshops and software demonstrations.

Description. This course will provide a basic overview to microcomputer usage and teach the use of computer-aided engineering design applications available in the Computer-Aided Structural Engineering (CASE) Library as well as other resources available to the Corps of Engineers.

The course will contain specific workshops and lectures on computer-aided engineering design applications. Some of the topics introduced in the workshops include: (a) DOS, Windows 95 and Windows NT; (b) Internet and World Wide Web; (c) structural engineering applications; (d) geotechnical engineering applications; (e) soil/structure interaction applications; (f) hydraulic engineering application; (g) finite element modeling; and (h) computer-aided design and drafting (Autocad, Microstation, etc.).

The applications presented in the workshops and lectures are primarily available in the CASE Library. For a further description of these applications, a CASE catalog is maintained by the ECPL - Waterways Experiment Station - Information Technology Laboratory - CEWES-ID-E.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0800; (b) Grade: GS-07 or above; (c) Other: nominee should be a design engineer interested in using computers or an engineer manager who supervises engineers using computer-aided engineering design. Familiarity with using microcomputers, though not required, is very helpful.

Session	Location	Date
2004-1	Vicksburg, MS	11/03/2003 11/07/2003

COMPUTER SECURITY

761 **55CSC01A**
Length: 6 Hours
Video Run Time: 1.1 Hours **Tuition: $600.00**

Purpose. This course is a brief overview of computer security as it applies to day-to-day operations. It is intended for everyone who is involved in maintaining security of Automated Information Systems (AIS). The course is divided into two major segments: Modules 1-3 are for all users of computer systems and Module 4 is for AIS managers.

Description. The topics covered in this course include (a) data sensitivity; (b) protection of systems, data, passwords, and information; (c) recognition of computer tampering and misuse; (d) authorized and unauthorized activities; (e) computer authorization documents; and (f) management of computer security activities and documentation.

Prerequisites. Nominee should be any person who uses or manages computers.

CONCRETE — QV

21 **35QVC01A**
Length: 36 Hours **Tuition: $1,150.00**
CEUs: 2.4 **LUs: 24**

Purpose. This course provides the participant with the specific knowledge of materials, techniques, and procedures for quality verification of concrete construction.

Description. Through lectures and conference sessions, this course covers concrete construction and inspection procedures including such subjects as materials, sampling, testing, handling, mixing, placing, consolidating, finishing, curing, and other miscellaneous items. Concrete construction problems and solutions will be covered.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0802, 0809, and 0810; (b) Grade: GS-05 or above. Students should have a current or projected assignment as general or concrete construction quality assurance representatives or related duties at the field level. This course is also well suited for junior engineers and for Corps division, district, and field office personnel directly concerned with concrete operations.

Notes. This course is also available in video-based format. Refer to Concrete-QV course (731).

Session	Location	Date
2004-1	Vicksburg, MS	11/03/2003 11/07/2003
2004-2	Vicksburg, MS	02/02/2004 02/06/2004

CONCRETE—QV

731 **35QVC01A**
Length: 40 Hours
Video Run Time: 4.3 Hours
LUs: 30 **Tuition: $2,150.00**

Purpose. This course provides the graduate with the technical knowledge, both theoretical and practical, to verify concrete construction with a degree of competency that best protects the interest of the government.

Description. The training materials include 1/2" videotape cassettes, a Facilitator's Guide, a Student Study Guide (SSG), and the American Concrete Institute Manual of Concrete Inspection. The SSG will include the videotape narration, task-active exercises and answers (pretest and posttest), reference materials, sample forms, an index, a glossary, and an acronym list.

MODULES. The 12 modules of instruction and 1 optional module presented in the course are (a) Quality Assurance Requirements; (b) Fundamentals of Concrete and Concrete Materials; (c) Preparation for Concrete Production; (d) Sampling and Testing Concrete; (e) Preparation for Placing Concrete at the Site; (f) Transporting Concrete; (g) Placing and Consolidating Concrete; (h) Finishing Concrete; (i) Curing Concrete; (j) Form Removal; (k) Joints; (l) Hot-Weather and Cold-Weather Concreting; and Optional Module: Special Concretes.

Prerequisites. Nominees must (a) Be high school graduates and (1) have duties, present or projected, as an inspector of concrete construction in the field and (2) have need, in some other capacity, of an in-depth knowledge of concrete construction inspection; and (b) not have attended the traditional Quality Verification: Concrete I at the Waterways Experiment Station within the past 5 years. Students should have completed the Construction Quality Management (classroom or exportable) course.

CONCRETE CONST INSPECT CERT (ACI)

332 **35QV201A**
Length: 36 Hours **LUs: 30**

Purpose. This course provides the participant with the specific knowledge required to become certified by the American Concrete Institute (ACI) as a Concrete Construction Inspector. The Corps of Engineers EM 1110-2-2000 as well as several Guide Specifications requires that those individuals responsible for inspection of concrete construction be certified.

Description. This course is designed to upgrade the quality of concrThis course is designed to upgrade the quality of concrete construction throughout the Corps of Engineers by providing training and certification to those individuals directly responsible for verifying concrete quality. Topics include role of the inspector, contract documents, concrete materials, pre-placement inspection, placement inspection, post-placement inspection plans reading, formwork installation and removal, reinforcement, embedments, sampling and testing freshly mixed concrete, conveying, placement, consolidation, finishing, jointing, curing and protection.

ACI CERTIFICATION EXAMINATION. The participants will be required to pass a rigorous three-hour multiple-choice examination of approximately 80 questions and a one-hour engineering plans examination of approximately 20 questions. The one-hour plans reading examination is designed to test the examinee's ability to read and understand engineering drawings. A score of 70 percent or higher constitutes a passing grade on each of the examinations. The three-hour written examination is open-book, but the technical materials allowed into the examination room are restricted to those listed as resource materials approved by ACI.

SPECIAL REQUIREMENTS.ACI will grant certification only to those applicants who: 1) Hold current certification as an ACI Concrete Field Testing Technician - Grade I; 2) Obtain a passing grade on the written inspection examination; 3) Obtain a passing grade on the written plans reading examination; 4) Possess at least one of the following qualifications: (1) A minimum of two years (60 credit hours) of college or technical school plus two years of work experience in concrete inspection and/or field testing of concrete. A copy of your diploma or transcript is required; (2) High school graduate equivalent plus a minimum of three years of work experience in concrete inspection and/or field testing of concrete. A copy of your diploma or equivalent is required; and (3) Five years of work experience in concrete inspection and/or field testing of concrete. Your work experience as required above must include: (1) Decision-making responsibility and authority; (2) Verification of compliance with plans, specifications, and codes; (3) Evaluation of concrete construction in the field; (4) Documentation and reporting of inspection results; and (5) Proficiency in appropriate areas of concrete construction inspection. Verification of the amount and range of work experience by the applicants employer(s) is required. The examination provided in this course is only part of the requirements for ACI inspector certification. The qualification of each individual is determined by the ACI Certification Department.

Prerequisites. Nominees must have taken the PROSPECT classroom course "Quality Verification: Concrete I" or the PROSPECT distance learning course "Concrete QV". No exceptions. In addition to this, nominees must be currently certified as an ACI Concrete Field Technician-Grade I. This certification can be obtained through successful completion of training courses conducted throughout the country by ACI Local Sponsoring Groups. Nominees should be assigned (a) Occupational Series: 0802, 0809, and 0810; (b) Grade: GS-07 and above.

CONCRETE MAINT & REP

257 **35CMR01A**
Length: 36 Hours **Tuition: $1,500.00**

Purpose. This course provides the participant with specific knowledge of materials, techniques, and procedures for repair of cracked and deteriorated concrete and for maintenance of sound concrete.

Description. Through lecture and demonstration sessions, the student will be able to identify the causes of distress, determine extent of failure, list advantages and disadvantages of making repairs, and recommend methods of repair with concrete, shotcrete, mortars, epoxy resins, surface coatings, and joint sealants. This course does not cover maintenance and repair of concrete pavements.

Prerequisites. Nominee must be assigned (a) Occupational Series: Selected 0800 series; (b) GS-05 or above; (c) Other: student should have a current or projected assignment which involves repair or maintenance of concrete.

Session	Location	Date
2004-1	Vicksburg, MS	04/05/2004 04/09/2004
2004-2	Vicksburg, MS	05/10/2004 05/14/2004

CONCRETE MATERIALS

23 **35CMT01A**
Length: 600 Hours

Purpose. This training develops and broadens the expertise of civil engineers in all aspects of advanced concrete materials technology. The program offered is unique in that there are no other individual short courses or seminars available which offer this extent of graduate training. The long-range objective is to provide continuity of an effective knowledge of concrete technology in each USACE command.

Description. Graduate school classroom instruction, seminars, and field trips cover the following: properties and production of concrete; advanced concrete and aggregates; special cement and concrete; and at least one other course which complements concrete materials to provide a minimum of 12 credit hours* which is a typical one semester graduate school workload.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0800; (b) Grade: GS-07 or above. Nominees must have a bachelors degree in civil engineering or a related discipline.

*Up to 15 semester hours of college credit (graduate level) may be obtained.

This course is offered through the graduate program in the Civil Engineering Materials Area at Purdue University. If you are interested in applying, please contact Professor Menashi Cohen directly, Professor of Civil Engineering, Purdue University, telephone number 765-494-5018, e-mail: mcohen@ecn.purdue.edu.

CONCRETE TECHNOLOGY

22 **35CET01A**
Length: 36 Hours **Tuition: $2,420.00**
CEUs: 2.5 **PDHs: 25** **LUs: 25**

Purpose. This course relates to the participant's responsibilities in design, construction, and evaluation of structures and preparation of specifications dealing with concrete and related products.

Description. Through lecture and conference sessions, this course covers design considerations (material investigations, thermal properties, specialized techniques, grouting, shotcrete, roller-compacted concrete, and high strength specialized applications); preparation of concrete materials design memorandum; construction (qualities of concrete, approval of materials, quality control, quality assurance, and acceptance); evaluation and maintenance of existing structure condition survey, nondestructive testing, instrumentation, cavitation resistance, fibrous concrete, and new materials. Time is allotted for consultation with instructors. Students should come to the course prepared to present an actual concrete materials problem they have encountered and which they believe may be of interest to their fellow students. Slide and overhead projectors, VCR and large screen TV, and other audio/visual aids are available in the classroom for students to use as needed in making their presentations.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0802, 0809, and 0810; (b) Grade: GS-09 or above; (c) Other: Students should have a current or projected assignment as design or construction engineers or senior technicians related to concrete materials.

Session	Location	Date
2004-1	Vicksburg, MS	04/19/2004 04/23/2004

CONF MGMT & DISP RES

306 **15NBD01A**
Length: 36 Hours **Tuition: $2,180.00**

Purpose. This course is designed to convey the knowledge and hands-on experience which makes dispute prevention and resolution a part of each Corps of Engineers manager's tool kit for effective decision-making. The skills developed in this course are applicable to every aspect of the work of the Corps. Accordingly, managers from all disciplines within the Corps will find the insights gained in this course helpful in carrying out their responsibilities. The course enables managers to address the types of conflict encountered in project management, regulatory functions, negotiating local cooperative agreements, managing operations and finances, base closure, and in the Superfund/

DERP responsibilities of the Corps. Course participants learn about the variety of Alternative Dispute Resolution (ADR) techniques and how to head off potential disputes or mitigate conflicts when they occur. This course is relevant to managers in all divisions within Major Subordinate Commands including, but not limited to, operations, construction operations, planning, engineering, personnel, real estate, resource management, and equal employment opportunity.

Description. Topics covered are (a) overview of major conflict situations across Corps programs; (b) how to identify the types of and reasons for disputes; (c) assessing the point in the "Life Cycle of Conflict" most beneficial for intervention; (d) a continuum of Alternative Dispute Resolution (ADR) techniques; (e) use of third parties in Dispute Resolution; (f) how to create "win-win" outcomes; (g) how and when to use Alternative Dispute Resolution (ADR) techniques; (h) planning to avoid and/or decrease litigation costs; (i) understanding the negotiator mediator, conciliator, and facilitator roles; (j) strategies of coalition building; (k) how to reach consensus; (l) what are negotiation and bargaining? what are the differences between positional and interest-based negotiations and when should they be used?; (m) fact-finding skills; (n) dealing with values; and (o) using communication skills of active listening and applying group process techniques to managing disputes.

Prerequisites. Nominees must: (a) be Corps Managers: Executive, Middle Management, and Project Managers; (b) have more than 4 years of Corps or other professional level work experience.

Session	Location	Date	
2004-1	Norfolk, VA	04/19/2004	04/23/2004
2004-2	Huntsville, AL	06/14/2004	06/18/2004

CONST CONT ADMIN

366 **41CCA01A**
Length: 36 Hours **Tuition: $920.00**
CEUs: 2.5 **PDHs: 25** **LUs: 25**

Purpose. This course provides a basic review of the DOD acquisition process as it relates to construction contract administration and field administration of fixed-price construction contracts. As an introductory course, it also serves as a developmental link between the construction and engineering career ladders.

Description. This course covers the typical construction contract administration procedures and responsibilities required to administer a fixed-price construction contract. The student is provided with the basic tenents of the FAR acquisition process and a detailed review of the construction management functions in a typical field office. The course provides a basic understanding of fixed-price construction contracts, important operative FAR, DFARS, AFARS, and EFARS clauses, legal considerations, and administrative requirements of government contracting. A series of lectures, problem-solving cases, and exercises are presented to highlight the important contractual and procedural issues encountered during the construction contract administration process.

Prerequisites. Nominees should be assigned (a) Occupational Series: Selected 0340, 0800, 0905, 1100; (b) Grade: GS-05 to GS-13; (c) Experience: 0-3 years in the construction function; (d) Responsibilities: personnel should be actively engaged in the field administration of fixed-price construction contracts; this course is also for those other series actively and directly involved in the construction contracting process; (e) Knowledge/Skills: nominee should possess a general knowledge of the post-award construction contract process.

Session	Location	Date	
2004-1	Huntsville, AL	10/20/2003	10/24/2003
2004-2	San Francisco, CA	01/12/2004	01/16/2004
2004-3	San Antonio, TX	03/15/2004	03/19/2004
2004-4	Jacksonville, FL	05/17/2004	05/21/2004
2004-5	Virginia Beach, VA	07/12/2004	07/16/2004

CONST QUALITY MGT

29 **35CQM01A**
Length: 20 Hours **Tuition: $580.00**
CEUs: 1.5 **PDHs: 15** **LUs: 15**

Purpose. This course is designed to be the primary introduction to the Construction Quality Management System as practiced in the Corps of Engineers. The targeted audience is all persons involved in the surveillance of construction contracts.

Description. After completing this course, the student will understand the objective of construction quality management related to establishing quality requirements, controlling quality during construction, and taking necessary measures to assure quality.

Through lecture and guided discussion sessions, this course covers a background of the system, inclusion of quality in documents, responsibilities of the contractor and the government under this system, implementation, and enforcement. Case studies are used to the maximum with emphasis on student participation.

The course utilizes ER 1180-1-6, Construction Quality Management; ER 415-1-10, Contractor Submittal Procedures (Shop Drawings and Materials); ER 415-1-11, Biddability, Constructibility, Operability, and Environmental Review; and ER 415-1-302, Inspection and Work Records.

Prerequisites. Nominees must be assigned (a) Occupational series: 0800; (b) Grade: GS-05 or above; (c) Other: Students should have a current or projected assignment as a member of the resident or area engineer's staff whose day-to-day function entails construction contract surveillance and contract administration. Specification writers and designers who establish the quality to be incorporated in the contract documents are eligible for attendance.

Notes. This course is also available in exportable format.

Session	Location	Date	
2004-1	Las Vegas, NV	12/01/2003	12/03/2003
2004-2	Las Vegas, NV	12/03/2003	12/05/2003
2004-3	Jacksonville, FL	05/24/2004	05/26/2004
2004-4	Jacksonville, FL	05/26/2004	05/28/2004

CONST QUALITY MGT (EXP)

734 **35CQE01A**
Length: 24 Hours
Video Run Time: 1.75 Hours
LUs: 24 **Tuition: $875.00**

Purpose. This course familiarizes Corps of Engineers quality management personnel and others with construction quality management policies, requirements, and procedures.

Description. This instructional program is based on approximately 2 hours of videotape instruction broken into 19 submodules of from 5 to 15 minutes each. The instructional program is designed to take 3 full days (24 hours) of instructional time.

MODULES. The eight modules of instruction presented in the course are (1) Introduction to Construction Quality Management (5 submodules); (2) BCO Review (2 submodules); (3) The Quality Assurance Plan (2 submodules); (4) The Quality Control Plan (2 submodules) ; (5) Preconstruction Conference and Coordination Meeting (not divided into submodules); (6) Submittals (not divided into submodules); (7) Government Quality Assurance (5 submodules); and (8) Making the System Work (not divided into submodules).

Prerequisites. Nominees should be assigned (a) Occupational Series: Selected 0800; (b) Grade: GS-07 or above; (c) Other: Current or projected assignment as a member of the resident or area engineer's staff whose day-to-day function entails construction contract surveillance and contract administration. Specification writers and designers who establish the quality to be incorporated in the contract documents are eligible for attendance. Further, construction contractor personnel, including those who are assigned to quality control activities, are encouraged to attend. In order to insure spaces, the district engineer should canvass contractors within his area, invite them to attend, and reserve an appropriate number of spaces.

CONST SAFETY—QV

739 **35ECS01A**
Length: 16 Hours
Video Run Time: 1.8 Hours **Tuition: $500.00**

Purpose. This training provides participants with a basic knowledge of the fundamentals of Construction Safety.

Description. The training is formatted in the following five modules of instruction: (a) introduction to quality verification construction safety; (b) excavation and trenching; (c) scaffolding and means of access; (d) inspecting temporary electrical services; and (e) heavy construction equipment.

This exportable training course consists of a Facilitator's Guide, Student Study Guide, EM 385-1-1, and videocassettes. The training takes approximately 2 days to complete; however, it can be administered in shorter increments to accommodate local needs.

Prerequisites. Nominees should be assigned (a) Occupational Series: Selected 0800; (b) Grade: GS-07 or above. Students should have a current or projected assignment as a member of the resident or area engineer's staff whose day-to-day functions entail construction safety inspection. Students should have completed the Construction Quality Management (classroom or exportable) course.

CONST WET HAB MITI (SEM)

439 **33CWH01A**
Length: 32 Hours **Tuition: $2,470.00**

Purpose. To identify a "Blue Print" for initiating, developing, engineering, planning, constructing, acquiring (real estate), operating and marketing presently authorized or future large-scale wetland ecosystem level projects which are consistent with both Corps and local sponsor needs.

Description. New Congressional authorities and regulations require the Corps to mitigate adverse project impacts on habitats including fish and wildlife. Several large-scale wetland ecosystem restoration and development projects for mitigation or improvement of the environment in Louisiana, Washington, Florida, California and Arizona have been approved and are in review, or are in the construction phase. This course introduces and overviews the engineering accomplishments and opportunities of these projects which involve many Corps business practices. The critical role of involving local cost sharing sponsors and marketing strategies to link Corps expertise with problem solutions to meet multi-agency needs are examined. An overview of wetland vegetation, wetland hydrology, wetland soils, monitoring, and costs is provided to present the framework for a "blueprint" for marketing and engineering future large-scale wetland ecosystem projects which are consistent with existing authorities. Highly facilitated panel and field problem solving sessions will be conducted.

Prerequisites. Planning, engineering, real estate, regulatory, construction, policy, natural resources, and legal counsel (GS-09 through GS-14).

Session	Location	Date	
2004-1	Olympia, WA	07/26/2004	07/29/2004

CONSTRUCTION SAFETY

215 **58COS01A**
Length: 24 Hours **Tuition: $570.00**
LUs: 24

Purpose. This course is designed for field personnel that have construction safety and health responsibilities. Course provides information relative to the Corps Safety and Health Requirements Manual, EM 385-1-1 and pertinent Occupational Safety and Health Administration (OSHA) construction standards.

Description. This course will cover through lectures, discussions, practical exercises, and case studies, the major aspects of the Corps of Engineers construction safety and health program. Using extensive construction safety backgrounds, instructor staff will discuss and examine prudent application of EM 385-1-1 to construction field settings and problem areas. Safety topics covered during these sessions will include the following: (a) construction safety mgmt; (b) trenching and excavation; (c) rigging and mechanized equip; (d) fall protection; (e) scaffolding and access; (f) occupational health rqmnts; (g) confined space entry; (h) hand and power tools; (i) temporary electrical service; (j) control of hazardous energy; (k) activity hazard analyses; (l) contractor safety submittals; (m) welding and cutting; (n) QA/QC - safety relationship; (o) contractual safety rqmnts; and (p) Corps/OSHA relationships. Participants will gain an overall understanding of the various elements that comprise a successful construction safety program and be provided current state-of-art safety technology and methodology as it relates to the Corps of Engineers.

Prerequisites. Attendance is open to all Department of Defense and other Federal agency employees who have a need for construction safety and health information or responsibility for enforcing contractual safety requirements. It is recommended that field construction personnel repeat attendance to this course on a three-five year cycle.

Session	Location	Date
2004-1	Tampa, FL	12/02/2003 12/04/2003
2004-2	San Antonio, TX	03/30/2004 04/01/2004

CONTR MGMT SYS (CMS)

933/CECPW **551CM01A**
Length: 24 Hours **Tuition: $800.00**

Purpose. The primary focus of the Contract Management System (CMS) is to help Army Directorate of Public Works personnel organize and manage their project acquisition process. CMS may be used to support the development of studies, plans, design, maintenance, construction or any other type of work targeted for accomplishment by contract.

Description. The Contract Management Sys (CMS)is used by DPWs to support the development and monitor the progress of contracted work of all types. This course provides both a lecture and hands-on practical exercises. Subjects include General Information on Work Requests; Creating Packages; Creating Line Items; Generating Package Schedules; Line Item Schedules; Committing Funds for Line Items; Updating Status and Solicitation Number information; Attaching Files; Generating Progress Schedules; Recording Obligations and Accruals; Making Modifications; Generating Warranty Information; Viewing Facility Data and adding/updating Work Request Facility information; Using and Editing Validation Tables; and Executing and Viewing Reports.

Prerequisites. DPW Managers, Project Engineers who are assigned to develop and manage individual projects, and anyone involved in oversight of the project acquisition program. This course is for DPW Personnel.

Session	Location	Dates
2004-1	Huntsville, AL	03/16/2004 03/18/2004
2004-2	Huntsville, AL	06/23/2004 06/25/2004
2004-3	Huntsville, AL	06/28/2004 06/30/2004

CONTRACTING OVERVIEW

742 **41CNO01A**
Length: 24 Hours
Video Run Time: 3.3 Hours
LUs: 20 **Tuition: $1,000.00**

Purpose. This course is intended to educate with focus on concepts rather than execution. It provides the student with a basic understanding of the contracting system emphasizing what is involved and why things are done, not how they are done.

Description. The training materials include two 1/2" videocassettes, a Facilitator's Guide, and a Student Study Guide. The course is a basic contracting course. Topics include Basic Federal Acquisition Regulation (FAR) System, Basic Responsibilities and Authorities, Acquisition Planning and Competition, Contracting Process, Socioeconomic Programs, Funding Issues, Contract Administration, Special Categories of Contracting, Forms, and Ethics/Standards of Conduct.

Modules/Submodules. (1) Introduction to Contracting Overview (no submodules); (2) Defense Acquisition Workforce Improvement Act (DAWIA) (no submodules); (3) Legal Procedural Framework (no submodules); (4) The Corps Contracting Team (no submodules); (5) Acquisition Planning and Competition (6 submodules); (6) The Contracting Process (3 submodules); (7) Kinds of Contracts (5 submodules); (8) Socioeconomic Programs (2 submodules); (9) Contract Administration/Management (8 submodules); and (10) Ethics/Standards of Conduct/Fraud, Waste and Abuse (no submodules).

Prerequisites. None. Students should be assigned to or expected to be assigned to a job involved with the procurement or contract administration process. This course is for all military and civilian job series involved in the acquisition process to include contracting, contract administration, project management, planning, resource management, and operations.

CORPS PATH-WBT

819
Length: Self-Paced **Tuition:N/C**

Purpose. The CorpsPath will help current Corps members work well together. It will also help us include new members into the Corps family, providing them with background, information and understanding on how they fit into their local organization, the larger U. S. Army Corps of Engineers, and the Army.

Description. The CorpsPath describes how members of the U. S. Army Corps of Engineers conduct themselves at work as they go about their daily business. The CorpsPath incorporates the Corps vision, values, missions, beliefs and business processes with high professional and personal standards. With the CorpsPath, Corps employees will share a common language, a sense of history and an approach to work life all designed to help us succeed. Individual personal success and our organization are very important to us all.

Prerequisites. The CorpsPath is presented in modules - Capable Workforce, Knowledge Management, Business Process, Corporate Relationships and Army Support.

CORROSION CONTROL

9 **35CCL01A**
Length: 36 Hours **Tuition: $1,770.00**

Purpose. This course familiarizes design engineers and engineers involved with project operations such as structural, mechanical, electrical, etc., with the mechanism of corrosion, the results if unchecked, and the methods of its mitigation. Designers, if familiar with corrosion phenomena, can temper their designs so as to avoid potential problems or make it easier to provide protection.

Description. Topics included in this course are: fundamentals of corrosion and engineering alloys; principles of cathodic protection and electrode potentials; design of cathodic protection systems; design considerations; atmospheric corrosion; design for underground cathodic protection systems; types of corrosion; painting practices; sea water corrosion; system test and evaluation; and materials selection. After discussions of fundamentals, course will divide into sections for military programs and civil works applications.

Prerequisites. Nominees must be assigned (a) Occupational series: selected 0800; (b) Grade: GS-09 or above; (c) Other: students should be designers or supervisory engineers.

Session	Location	Date
2004-1	Champaign, IL	02/09/2004 02/13/2004

COST EST BASICS

181 **35CEB01A**
Length: 36 Hours **Tuition: $1,030.00**
CEUs: 3.1

Purpose. This course provides training on basic cost estimating principles and fundamentals. The training is intended for individuals who are entering the Cost Engineering profession with little or no cost estimating experience or who will be responsible for the review or preparation of detail cost estimates for Military Programs, Civil Works, Environmental and other projects as required.

Description. This is a non-computer based basic course designed to teach individuals cost estimate preparation and how to identify and classify costs associated with the construction. Through the use of lectures, visual aids, and individual and group practical exercises, the course provides instructions on: (a) an overview of procurement and cost engineering regulations; (b) work breakdown structures; (c) reading construction drawings; (d) quantity calculation and development; (e) performing manual quantity takeoffs; (f) determining labor costs and crew composition; (g) estimating costs of equipment, material, and supplies; (h) developing indirect costs; (i) determining cost escalation and contingencies; and (j) preparing estimate summaries.

Prerequisites. Nominees must be assigned (a) Occupational series: selected 0800; (b) Grade: GS-05 through GS-09. A pocket calculator is required for this class.

Notes. This course has a precourse assignment. The student should bring their completed precourse assignment with them to the course. This course contains requirements which are mandatory for course completion and may require an estimated 8 hours of overtime. It is the student's responsibility to certify the amount of time expended on these requirements to the supervisor when overtime compensation is requested.

Session	Location	Date
2004-1	Denver, CO	03/15/2004 03/19/2004
2004-2	Huntsville, AL	06/14/2004 06/18/2004

COST-REIMBURSE CONTR

1 **41CRC01A**
Length: 36 Hours **Tuition: $920.00**
CEUs: 2.5 **PDHs: 25**

Purpose. This course provides practical guidance on how to structure, solicit, and manage cost-reimbursement contracts. The course is suitable for all functional elements, but is primarily geared to the Corps construction execution workforce. The course directly supports the Corps vision by addressing many contemporary issues regarding the management of innovative contracts and supports the "Best Value" selection process.

Description. This course covers the acquisition strategy, source selection, and management of cost-reimbursement contracts. The instruction and text material addresses solicitation preparation to final closeout of cost-reimbursement contracts. Specific subjects addressed include the history of cost-reimbursement contracts, acquisition policies, selection of contract type, preparation of the request for proposal, source selection procedures, cost accounting, procurement and property management, Work Authorization Document (WAD) and Earned Value Systems for cost control, fee and profit policies, Corps organization and management, contractors organization, and final closeout.

Prerequisites. Nominees should be assigned (a) Occupational Series: 0028, 0340, 0560, 0800, 0905, and 1100; (b) Grade: GS-11 or above; Military—Captain or above; (c) Responsibilities: personnel should be assigned or actively engaged in the administration of a current or future cost-reimbursement contract or to a start-up team for a cost-reimbursement contract; (d) Knowledge/skills: nominee should possess a general knowledge of contracting procedures and construction contract administration; (e) Prerequisite training: nominee should have completed the basic Construction Contract Administration course (No. 366).

Session	Location	Date	
2004-1	Denver, CO	01/26/2004	01/30/2004
2004-2	Huntsville, AL	05/03/2004	05/07/2004

CQC-BRIDGE TO SUCCESS

745 **54CQC01A**
Video Run TIme: 14 Minutes **Tuition: $25.00**

Purpose and Description. This training film presents a uniform set of facts about the typical construction contract CQC system in the form of an overview geared toward the contractor. It may be used during preconstruction or coordination meetings and addresses what is expected of the contractor during construction. It is accompanied by EP 715-1-2. No student study guide or facilitator guide accompanies this program

Prerequisites. Each quality assurance personnel or supervisor assigned to a Corps construction contract should view the program. Attendees should have a knowledge of construction practices for each discipline under their purview and a general knowledge of the building codes or standards for those disciplines.

CQM FOR CONTRACTORS

784
Length: 16 Hours
Video Run Time: 1.25 Hours
CEUs: 1.3 **Tuition: $625.00**

Purpose. This course familiarizes contractor personnel with the Corps of Engineers Construction Quality Management concepts and procedures.

Description. The training is formatted in the following eight modules of instruction: (1) Introduction; (2) Contractor's Review; (3) Quality Management Planning; (4) Preconstruction Conference and Coordination Meeting; (5) Submittals; (6) Quality Management During Construction; (7) Making the System Work; and Optional Module (8) the Resident Management System.

Special Guidance. Under the revised requirements of CEGS-01451, Contractor Quality Control, it is mandatory that this course be successfully completed to be approved as the contractor's quality control manager. This is effective in June 1995.

EFFECTIVE 1997: Upon successful course completion certificates are valid for five years.

DREDGING QA/QC

730 **Tuition: TBD**

Purpose. Under Development

Description. Under Development

Prerequisites. Under Development

CQM-CD ROM

795
Length: 24 Hours
CD-ROM Time: Self-Paced
LUs: 24 **Tuition: $75.00**

Purpose. This course familiarizes Corps of Engineers quality management personnel and others with construction quality management policies, requirements, and procedures.

Description. This course is a CD-ROM version of Construction Quality Management. The instructional program is designed to be taken self-paced. The course can be taken for review in small groups with a facilitator. However, for credit the course must be completed self-paced by each student. As a minimum,

in order to view this course the following hardware/ software will be required: 486DX4-100MHZ computer with 16MB Ram, 2MB Video Ram, 16-bit sound card, 1.2GB Hard Disk Drive, 6X Speed CD-ROM Drive, and Internet connection with web browser capabilities. Program will operate on either Windows 3.1 or Windows 95 operating system.

Prerequisites. Nominees should be assigned (a) Occupational Series: Selected 0800; (b) Grade: GS-07 or above; (c) Other: Current or projected assignment as a member of the resident or area engineer's staff whose day -today function entails construction contract surveillance and contract administration. Specification writers and designers who establish the quality to be incorporated in the contract documents are eligible for attendance. Further, construction contractor personnel, including those who are assigned to quality control activities, are encouraged to attend.

CRANE SAFETY

32 **58CNS01A**
Length: 32 Hours **Tuition: $970.00**

Purpose. This course provides students with a fundamental understanding and knowledge of the safe operation of the various types of cranes and lifting devices used within the Corps of Engineers. Inspection, maintenance and operational requirements for cranes and lifting devices will also be covered in this 4-day course.

Description. Areas to be covered in this course include the following topics: (a) types of cranes; (b) design and construction of cranes; (c) wire ropes and sheaves; (d) crane and hoist signals; (e) selecting and training operators; (f) inspection of lifting equipment; (g) safety rules for cranes; (h) barge mounted cranes; (i) draglines and piledrivers; (j) ANSI and consensus standards; and (k) EM 385-1-1 requirements.

Prerequisites. Nominee must be assigned to field activities and require an indepth knowledge of cranes and lifting devices. All grade levels are accepted. Course is specifically recommended for Corps of Engineers heavy equipment operators, i.e., crane, dragline, pile-driver, etc.

Session	Location	Date
2004-1	Huntsville, AL	10/20/2003 10/23/2003
2004-2	Huntsville, AL	04/19/2004 04/22/2004
2004-3	Huntsville, AL	04/26/2004 04/29/2004

CULTURAL RESOURCES

299 **33CUR01A**
Length: 36 Hours **Tuition: $970.00**

Purpose. This course provides students with a broad-based understanding of the character and quality of cultural resources, a working knowledge of the identification and assessment procedures applied to those resources, and a review of tribal policy principles that impact agency cultural resources management. The course is designed for planners, environmental resources managers, student managers, project managers, and others who will participate in the management of cultural resources and interact with Indian tribes.

Description. The attributes, quality, and values of cultural resources are examined with the processes of identification, evaluation, and impact assessment described in detail. Students receive an overview of Corps planning principles and guidelines focusing on the integration of cultural resource considerations with other resource planning and management activities. Attention is given to provisions of the National Historic Preservation Act (NHPA) of 1966, the Archeological Resources Protection Act of 1979, the Native American Graves Protection and Repatriation Act and other legislative and regulatory requirements. This course gives special consideration to the procedural requirements of Section 106 of the NHPA and the interrelationships of the agency, the Advisory Council on Historic Preservation, the State Historic Preservation Office, and officials of Indian tribes. The program also offers an overview of the nature of Corps relations with Indian tribes including an understanding of the Trust relationship, government-to-government relations, treatment of Native American human remains and associated objects and Indian access to sacred sites. State-of-the-art field techniques, methodologies regional overviews, and data management are illustrated.

Prerequisites. Nominees must be assigned (a) Occupational series: selected 0020, 0100, 0400, 0800 and 1300; (b) Grade: GS-07 or above (water resource planners, rangers, park managers, planners, study managers, designers - anyone potentially involved with cultural resources during the planning, design, or operation of a project). Nominees should have attended the Environmental Impact Assessment course and the Planner Orientation course, or equivalents.

Session	Location	Date
2004-1	Santa Fe, NM	05/10/2004 05/14/2004
2004-2	Santa Fe, NM	05/17/2004 05/21/2004
2004-3	Santa Fe, NM	06/07/2004 06/11/2004

CW PROGRAM DEVEL(SEMINAR)

10 **46CWP01A**
Length: 28 Hours **Tuition: $780.00**

Purpose. This seminar is primarily designed for civil works project delivery team members and program managers. It provides a comprehensive understanding of civil works mission accomplishment, HQ-level programs management activities, and the importance of the Project Management Business Process (PMBP)in program execution.

Description. The seminar includes discussions of topics in view of the Project Management Business Process, including: (1) the Corps of Engineers civil works organization, the Administration, and the Con-

gressional committees that provide legislative oversight of the civil works program through authorizations and appropriations; (2) program development, including new start and continuing programs, and funding capabilities; (3) program defense, including OMB and Congressional hearings; and (4) program execution, including work allowances, reprogramming actions, performance measurement.

Prerequisites. Nominees must be project delivery team members, GS-340 program managers, chiefs of organizations that support the Project Management Business Process (e.g., Real Estate, Counsel, Resource Management). Division and district commanders, deputy commanders with civil works missions, and members of the Senior Executive Service are invited to attend this seminar.

Notes. The number of spaces available for this seminar is limited. It is important that students are those team members who will benefit most from the training. Therefore, the selection process will be managed in the division office by the Director of Civil Works and Management and in the district office by the Deputy District Engineer for Programs and Project Management.

Session	Location	Date
2004-1	Tampa, FL	06/15/2004 06/18/2004

CW PROGRAMMING PROCESS

358 **46CWB01A**
Length: 36 Hours **Tuition: $1,270.00**
CEUs: 3.1

Purpose. This course is designed primarily for programmers, project managers, study managers and functional mission personnel. It provides a comprehensive understanding of civil works activities, programming and project/study management concepts and their interrelationship with mission accomplishment.

Description. The course includes practical exercises and discussions of: (1) the Corps of Engineers, the Administration, the Congress, and actions relative to civil works studies and projects, authorizations, and appropriations; (2) program development and formulation at the district and the division level, including new starts, continuing programs and capabilities; (3) detailed preparation of study/project cost estimates, schedules, justification documents, and related project management documents; (4) program defense including the question and answer process, district briefings, division testimony, and OMB and congressional hearings; (5) study/project and program execution, including work allowances, reprogramming actions, and related documents.

Prerequisites. Nominees must be assigned (a) Occupational Series: Any job series within career program 18 (engineers and scientists) and career program 11 (comptroller); (b) Grade: GS-07 and above - below GS-07 individuals are eligible if recommended by their supervisors; (c) categories of eligibility: 1. Personnel assigned to programs and project management, and planning organizations. 2. Personnel assigned to engineering or construction-operations functional elements who are involved in the civil works funding process and/or the preparation of program information. 3. Other personnel assigned to positions in support of programs and project management who require a greater understanding of the civil works programming process and the preparation of related documents.

Session	Location	Date
2004-1	New Orleans, LA	07/12/2004 07/16/2004
2004-2	San Diego, CA	08/09/2004 08/13/2004

DAM SAFETY

28 **54DAS01A**
Length: 32 Hours **Tuition: $1,660.00**

Purpose. This course trains managers, engineers, geologists, technicians, and project operating personnel in FOA engineering, construction, and operations divisions on all aspects of the Corps of Engineers Dam Safety Program. The background and history of dam safety in the Corps is covered along with the multidiscipline design, construction, and operational considerations. Details of planning, conducting, and reporting the results of a periodic inspection are included. Guidance on project surveillance by operation personnel along with the Dam Safety Assurance Program are covered in detail. Public awareness and preparedness are included.

Description. Through lectures, case histories, and structured student discussions, the course covers all aspects of a dam safety program. The course outlines technical considerations (hydrologic, seismic, geotechnical, electrical/mechanical and structural) as well as the operational requirements (operation, maintenance, surveillance, preparedness, training, and notification). The scope and implementation details of the Dam Safety Assurance Program are covered in detail. Presentations, video modules, case histories, and a walk-through inspection are used to effectively present a multidiscipline approach to the successful monitoring and evaluation of Corps of Engineers dams.

Prerequisites. Nominee must be assigned (a) Occupational Series: Selected 0800 and 1350; (b) Grade: GS and WG, as appropriate. The course is intended for all personnel involved in the design, construction, operation, inspection, and maintenance of Corps dams.

Session	Location	Date
2004-1	Vicksburg, MS	03/15/2004 03/18/2004
2004-2	Vicksburg, MS	05/10/2004 05/13/2004

DESIGN-BUILD CONSTRUCTION

425 **35DBM01A**
Length: 36 Hours **Tuition: $930.00**
CEUs: 3.1

Purpose. This course provides current information to Corps of Engineers personnel and customers doing business with the Corps of Engineers on the latest developments, lessons learned and use of Design-Build as a construction method.

Description. Topics include: (a) Design-Build Overview; (b) Planning the Acquisition; (c) Special Contract Requirements and Important Clauses; (d) Developing Technical RFP Requirements; (e) Proposal Submission Requirements; (f) Proposal Evaluation Requirements; (g) Source Selection Plans; (h) RFP Completion; (i) Source Selection (j) Contract Award and Beyond; and (k) Contract Management.

Prerequisites. Nominees should be individuals involved in Design-Build contracting, including: Engineering, Construction, Contracting, Counsel, Project Management, and Customers.

Session	Location	Date
2004-1	Huntsville, AL	10/27/2003 10/31/2003
2004-2	San Diego, CA	01/26/2004 01/30/2004
2004-3	San Antonio, TX	03/08/2004 03/12/2004
2004-4	Jacksonville, FL	04/26/2004 04/30/2004
2004-5	Seattle, WA	06/07/2004 06/11/2004

DIESEL GENERATORS: BASICS/TESTING

106 **54DGN01A**
Length: 36 Hours **Tuition: $1,960.00**

Purpose. This course provides a general familiarization with the components and systems that make up a diesel generator and teaches the proper testing and checkout procedures to be followed prior to accepting generating units from the construction contractor.

Description. Through lectures, visual aids, and demonstration sessions, this course covers such subjects as engine and generator basics, fuel systems, heat transfer systems, generator exciters and regulators, governors, instrumentation, design criteria, various factory and field test procedures, automatic transfer switches, and typical installation problems. A portion of this course will be conducted utilizing a diesel generator unit to perform some typical field tests.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0802, 0809, 0810, 0830, and 0850; (b) Grade: GS-07 or WG-07 or above. The broad content of the course is beneficial for technically-oriented construction, design, and maintenance personnel. Nominees should have a current or projected responsibilities that will include power generation specification, procurement, installation, testing or operation. Recommend that nominees complete the Electrical, Mechanical, or General Quality Verification Courses prior to taking this course. Engineers are exempt from this prerequisite requirement.

Session	Location	Date
2004-1	Denver, CO	06/14/2004 06/18/2004

DISTRICT OFCR INTRO

334 **41DOI01A**
Length: 68 Hours **Tuition: $3,890.00**
CEUs: 6.7

Purpose. This course is designed to orient the newly assigned engineering officer who is an engineer by training but has done little or no business in the USACE environment. The course provides a broad overview of the organization and covers a wide range of topics relating to all facets of the Corps of Engineer's mission.

Description. Course is structured to take students through all phases of military and civil works projects. Specific topic areas include programming, budget design, project management, acquisition, planning, contracting, construction contract management, legal considerations, and environmental issues. Case studies and practical exercises are utilized to enhance the student's understanding of specific subject matter in selected areas of the course. The course is designed to familiarize the student with the field operating environment.

Prerequisites. Nominees will be nominated by HQDA (Engineer Branch), the Military Personnel Division (CEHR-M) of HQUSACE, division and district commanders, and laboratory directors. Nominees should be (a) Occupational branch series: 21; (b) Paygrades: 02, 03, or 04; (c) newly assigned officers who will be assigned duties within the USACE environment in the Area of Concentration (AOC) 21D; (d) newly assigned civilian personnel GS-12 and above.

RELATED INFORMATION. No quotas are allocated from the Annual Training Needs Survey because course attendees are nominated and approved by commanders and directors in the command structure. Nominees are notified of course attendance within 60 days of the start date. Even though nominees are being directed to attend this course as outlined in ER 350-3-5, funding is accomplished through the tuition method. Corps organizations will be billed in accordance with Corps standard operating procedures.

NOTE: This training is part of the approved training for Engineering Officers. Course attendance is recorded in the official personnel files (ORB).

Session	Location	Date
2004-1	Huntsville, AL	12/02/2003 12/11/2003

DIVING INSPECTOR

397 **33DIS01A**
Length: 40 Hours **Tuition: $2,480.00**

Purpose. This course provides Corps of Engineers employees who have quality assurance, safety, and/or oversight responsibilities for diving contractor activities and/or operations. This training provides attendees with the necessary skills, knowledge, and abilities to safely and successfully perform inspections and oversight of diving contractor operations.

Description. This course consists of both classroom discussions and open-water exercises. In-depth training sessions cover the following topics: (a) diving physics; (b) diving physiology; (c) dive tables; (d) SCUBA equipment and operations; (e) surface supplied air equipment and operations; (f) diving support equipment; (g) diving in contaminated water; (h) underwater tools; (i) diving accident management; (j) dive planning and contractor submittals; (k) Corps of Engineers regulations; and (l) inspection of diving operations.

Prerequisites. Nominee must have a current or projected assignment to a position that requires knowledge of contractor diving operations, and must not be a Corps of Engineers diver or diving supervisor. Attendees must participate in all exercises and score at least 70 percent on the comprehensive post-course examination.

Session	Location	Date	
2004-1	Key West, FL	12/08/2003	12/12/2003

DIVING REFRESHER

259 **54DVR01A**
Length: 64 Hours **Tuition: $2,720.00**

Purpose. This course provides Corps divers and diving supervisors with the latest technical and managerial data as it relates to underwater diving. This course is required at 4-year intervals after completing the Diving Safety and/or Diving Supervisor course as stated in ER 385-1-86 for those persons working with underwater diving programs. Students will satisfactorily complete all aspects of the training to receive certification.

Description. Through lectures and demonstration sessions, this course covers (a) state-of-the-art diving equipment and procedures; (b) latest developments in accident management techniques; (c) refresher training in decompression tables; (d) refresher training in repetitive diving; (e) refresher training in diving medicine; and (f) recompression chamber experience.

Prerequisites. (a) Attendees must have successfully completed the Diving Safety and/or Diving Supervisor course.* Divers should have a current or projected assignment in diving activities and have passed a diving medical examination within the previous 12 months. Verification of medical exam will be required at the course. (b) Attendees must make at least 70 percent on comprehensive post-course examination for recertification. (c) Attendees must participate in and complete all phases of instruction. Failure to participate in all class activities will be cause for course failure.

* The Corps of Engineers Diver/Supervisor Certification Card (wallet) will be required at the course.

Session	Location	Date	
2004-1	Key West, FL	03/09/2004	03/18/2004

DPW BASIC ORIENTATION

988/CECPW **54DBO01A**
Length: 36 Hours **Tuition: $800.00**

Purpose. This course provides students with an overview of the Army Installation Management Concepts, Organization and missions, and Directorate of Public Works (DPW) operations.

Description. The course covers the Real Property requirements planning, acquisition planning, financial and work management systems, and operational evaluation procedures, organization, function, and mission of the DPW, and how to integrate real property maintenance activities. Classroom instructions includes lectures, and practical exercises.

Prerequisites. It is recommended that nominees be Department of the Army personnel.

Session	Location	Dates	
2004-1	Huntsville, AL	01/05/2004	01/09/2004
2004-2	Huntsville, AL	05/24/2004	05/28/2004

DPW BUDGET/JCA

981/CECPW **42DBF01A**
Length: 32 Hours **Tuition: $800.00**

Purpose. This course is for Personnel working at a DPW Installation as a Budget Chief, Budget Analyst, Budget Assistant, Resource Management (RM) Branch Chief, Engineering Team Leader, or other personnel responsible for financial management of installation Real Property Maintenance Activity (RMPA) Resources. The course provides a concentrated look at the Integrated Facilities System (IFS) Job Cost Accounting (JCA) module's role as a tool to manage the financial aspects of work accomplished by the DPW. The scope of the presentation includes both RPMA resources interfaced to the installations financial management system and project work maintained internal to IFS only.

Description. Through lectures, individual study and class exercises, this class teaches students how to enter cost data into IFS, how obligations and expense's are related to engineer work documents in the system, and how costs/hours/EOR information are passed to other accounting systems. Students will learn those IFS tables which affect the Job Cost function, those tables

which must be built with unique installation data, and how to set up those tables for the proper functioning of the IFS Job Cost Accounting function. Also covered are the interactions between Job Cost Accounting and other IFS functional areas.

Prerequisites. Nominees should have a minimum of 3 months experience of on-the-job exposure of Job Cost Accounting and other related systems. Series: 0500, 0800 Grade: GS-07 thru GS-13. Students should be DPW Installation Personnel.

Session	Location	Dates	
2004-1	Huntsville, AL	07/20/2004	07/23/2004
2004-2	Huntsville, AL	07/26/2004	07/29/2004

DPW ENGRD PERF STD

987/CECPW **54DPS01A**
Length: 40 Hours

This is an onsite class only

Purpose. This course teaches students to properly apply Engineered Performance Standards (EPS) in estimating maintenance and repair work within the Directorate of Public Works (DPW) organization at Army installations and communities.

Description. The EPS standards and their application are the basis for the development of the Facilities Engineering Job Estimating system (FEJE) and Integrated Facilities System (IFS) Work Estimating automated estimates. The principles learned here enable the estimator to develop manual estimates using the hard copy craft handbooks and provide the estimator with an in-depth understanding of EPS is applied in an electronic estimating environment.

Prerequisites. It is recommended that nominees be personnel involved in Real Property maintenance. The prior completion of Supply 2000 Computer Based instruction is strongly recommended.

DPW IFS INTRODUCTION

971/CECPW
Length: 32 Hours **Tuition: $800.00**

Purpose. To teach Directorate of Public Work (DPW) Installation Personnel who work on the Integrated Facilities System (IFS) the following: (1) What IFS is; (2) What the Screens can do; (3) Show what Screens do; (4) Give the students information on "SQL" and (5) show what reports can be pulled with SQL.

Description. This course will cover all the modules of the Integrated Facilities System (IFS). The students will learn the following: (1) How to sign on to IFS; (2) Splash Screens; (3) Menu Bar; (4) Tool Bar; (5) How to go to the Modules; (6) Basic SQL.

Prerequisites. DPW Installation Personnel who work on the Integrated Facilities System (IFS).

This course is for DPW Installation Personnel.

Session	Location	Dates	
2004-01	Huntsville, AL	02/02/2004	02/05/2004
2004-02	Huntsville, AL	04/05/2004	04/08/2004

DPW JOB ORDER CONTR ADV

991 **441DJA01**
Length: 24 Hours **Tuition: $850.00**

Purpose. This course teaches students strategies and procedures for technical discussion and negotiation with contractors in the JOC task order process. JOC is most applicable to the Directorate of Public Works (DPW) organization on an Army installation or community.

Description. Through lectures and a contract negotiation workshop, this course covers preparation for negotiation, conduct of negotiation sessions, alternatives, and documentation. It also provides students with an understanding of the overall process of contract changes, modifications, and claims and prepares individuals to perform their roles in the contract actions applied to JOC.

Prerequisites. It is recommended that nominees be Army installation DPW or supporting contracting office personnel that are, or expect to be, performing as JOC project managers, ordering officers, or contract administration personnel. Contractor personnel are not eligible to attend. It is advisable to have completed the Job Order Contracting, Basis Course and have at least one year working experience with JOC prior to taking the Job Order Contracting, Advanced Course.

Note: Attendees need a calculator to benefit from the Practical Exercises that are an integral part of the course.

Session	Location	Date	
2004-1	Huntsville, AL	06/22/2004	06/24/2004
2004-2	Huntsville, AL	07/20/2004	07/22/2004

DPW JOB ORDER CONTR, BASIC

990 **41DJB01A**
Length: 32 Hours **Tuition: $850.00**

Purpose. This course teaches students the basic policies, and procedures for properly executing sustainment, restoration, and modernization (SRM) projects using a Job Order Contracting (JOC) contract applicable to the Directorate of Public Works organization on an Army installation or community.

Description. The course covers the elements of JOC; task order scoping; task order proposal requesting, receiving, reviewing, evaluation, negotiation, and docu-

mentation; task order placement by ordering officers; key JOC management issues; and contract administration procedures under JOC. The underlying themes through all the modules of the course emphasize a cooperative working agreement between contractor and government; efficient and timely processing and completion of projects; and adherence to proper contract administration procedures.

Prerequisites. The nominees for this course may include any DPW and contracting office personnel. However, the course is specifically oriented for personnel assigned or about to be assigned duties in the JOC activity within the DPW, and personnel of the supporting contracting office that will be involved in JOC contract administration.

Session	Location	Date
2004-1	Huntsville, AL	01/26/2004 01/29/2004
2004-2	Huntsville, AL	05/24/2004 05/27/2004

DPW PBC I

979 **41DBP01A**
Length: 36 Hours **Tuition: $610.00**

Purpose. This course is for supervisors, technical and project managers, contracting officers, contracts specialists, and technical personnel responsible for identifying requirements or preparing solicitation documents for service contracts including those prepared as part of an Office of Management and Budget (OMB) Circular A76 Cost Study. This course addresses the regulatory requirements, policies andprocedures governing the performance-based contracting (PBC) methodology.

Description. Through lectures, individual study, and work group activities, this course provides a detailed description of the PBC methodology. Unique PBC terms and definitions are presented and the structure of the contract is demonstrated through the use of examples and discussion. The systems approach to job analysis is covered in detail with examples and exercises which are used as the building blocks for required solicitation documents. Development of the Performance Requirements Summary, the contract schedule (Section B of the Uniform Contract Format), and the Performance Work Statement are addressed in detail and reinforced in practical exercises building on the previous days work. Emphasis is placed on identifying performance indicators, performance standards, and an appropriate Acceptable Quality Level. Appropriate Federal Acquisition Regulation (FAR) clauses and special PBC contract clauses are explained and detailed coverage is provided for developing a contract Quality Assurance Surveillance Plan (QASP). Source selection procedures are addressed, including determining appropriate evaluation criteria and using best practices and past performance as part of the process.

Prerequisites. It is recommended that nominees be generally familiar with the federal procurement systems. Nominees should include all contracting officers, contracts specialists, facilities managers, maintenance staff, planners, estimators, and quality assurance evaluators who are or will be involved in service contracting pre-award activities.

DPW PERFORMANCE-BASED SERVICES ACQ

974 **41PBC01A**
Length: 36 Hours **Tuition: $850.00**

Purpose. This course is for supervisors, technical and project managers, contracting officers, contracts specialists, and technical personnel involved in the administration of Performance-Based Contracts. This course addresses the regulatory requirements, policies and procedures governing PBSC and service contract administration. It incorporates recent DoD guidance addressing techniques for Performance-Based Services Acquisition using Commercial Item acquisition procedures.

Description. Through lectures, individual study, and work group activities, this course provides a detailed description of PBSC methods.

The course has three components. In the first component the emphasis is on the Pre-Award phase of DPW Performance-Based Services Contracting. In this component; unique PBSC terms and definitions and the structure of the contract is demonstrated through the use of examples and discussion. The systems approach to job analysis is covered in detail with examples and exercises which are used as the building blocks for required solicitation documents. Development of the pricing schedule and Performance Work Statement are addressed in detail and reinforced in practical exercises. Emphasis is placed on identifying performance indicators, objectives, and standards, and the desired performance thresholds. The importance of market research is stressed in identifying commercial products or services available that might satisfy Government needs. New rules and procedures which allow the Government to select contractors with proven performance records are explained. The importance of selecting the contractor that offers the best value to to the Government is identified.

In the second component the emphasis is on the Post-Award phase of DPW Performance-Based Services Contracting. Applicable FAR clauses, special PBSC contract clauses, and unique PBSC terms and definitions are presented and the structure of the contract is demonstrated through the use of examples and discussion. Contractor quality control requirements are discussed and Quality Control Plan evaluation procedures are provided. Surveillance monitoring techniques are addressed, including selecting the surveillance method, scheduling surveillance activities, evaluating and documenting observation results, initiating corrective actions, and adjusting the surveillance plan. Use of the Quality Assurance Surveillance Plan (QASP) in required services performance is covered. Emphasis is

on assessing the contractor's management and performance metrics and partnering with the contractor to prevent problems, rather than on identifying problems and subsequently correcting them. Surveillance methods are explained and the efficiency and effectiveness of random sampling techniques are demonstrated. The emphasis on payment deductions is reduced; however, some exercises are still included to illustrate calculations for payment deductions for non-performance or unsatisfactory performance. Contract administration functions are addressed including delivery order administration, contract modifications, liquidated damages, contractor claims, and contract close-out procedures.

The third component is devoted to practical exercises to the pre-award phase (first component) and the post-award phase (second component).

Other: Attendees are requested to bring examples of contracts, contract actions, and modifications which are conducive to a Performance-Based Services Contract vehicle. Those examples will be critiqued and the information gained provided to the attendees with the goal of enhanced Performance-Based Services Contracting practices and processes in a real-world environment.

Prerequisites. None; however, familiarity with the federal procurement process is recommended and prior contacting experience is helpful. Nominees should include contracting officers, contracts specialists, facilities managers, maintenance staff, planners, estimators, and quality assurance evaluators who will be involved in administering service contracts.

Note: Attendees need a calculator to benefit fully from the Practical Exercises that are an integral part of the course.

Session	Location	Date	
2004-1	Huntsville, AL	05/03/2004	05/07/2004
2004-2	Huntsville, AL	06/07/2004	06/11/2004

DPW PROGRAM MGMT

999 **15DMF01A**
Length: 36 Hours **Tuition: $800.00**

Purpose. This course provides students with an insight into the functional relationships between Operations & Maintenance (O&M), Engineering Plans & Services (EP&S), Engineer Resource Management (ERM) and other Directorate of Public Works (DPW) key personnel and those with Army installation organizations.

Description. Through lectures and an intensive practical exercise, the course centers around the ERM, O&M and EP&S Divisons' requirements to direct, coordinate and control DPW operations, such as Master Planning, Resource Management, Execution of the work of Master Planning, and an Annual Work Plan. The course uses lectures, small group instruction, and practical exercises to reinforce the objective.

Prerequisites. Nominees must have taken the DPW Basic Orientation Course, CRS # 988 and DPWMOC Course, CRS #989. Nominees must work as a branch chief at a DPW. Nominees must also have 2 years experience working with the Directorate of Public Works (DPW).

Session	Location	Dates	
2004-1	Huntsville, AL	02/09/2004	02/13/2004
2004-2	Huntsville, AL	07/12/2004	07/16/2004

DPW PWMOC

989/CECPW **15DMO01A**
Length: 64 Hours **Tuition: $1,200.00**

Purpose. This course provides an orientation for the new Directorate of Public Works (DPW) Managers and key DPW staff personnel.

Description. This course covers the administration, organization, functions, and management systems of the installation DPW to include: Operations and Maintenance, Army (OMA) and Army Family Housing (AFH); Work Classification and Approval Limits; the DPW Financial and Work Management Systems; the DPW Resource Management and Annual Work Plans; DPW Automation; and Real Property Management and Master Planning. Other topics discussed include: Department of Defense (DOD), Department of the Army (DA) and Installation Management and Organization concepts relative to DPWs; US Army Reserve (USAR) and Non-Appropriated Fund/Morale, Welfare and Recreation (NAF/MWR) Programs and Projects; Contract Management System; US Army Corps of Engineers (USACE) Installation Support; and current Headquarters, Department of the Army (HQDA) Environmental, Facilities, and Housing Issues. The classroom instruction includes lectures/seminars presented by experienced guest speakers from Headquarters Department of the Army (HQDA) and DPWs; group practical exercises; classroom discussion; individual assignments; and an examination.

Prerequisites. It is recommended that nominees should be Active Army and reserve component commissioned officers, CPT through LTC, or senior noncommissioned officers, E7 through E9, that have been recently assigned or projected for an assignment to an installation DPW management position; CPT through COL that are currently in or projected for an assignment to a Region DPW – related management position; Department of the Army civilians, GS-09 or above, at installation level, Region or HQDA; DPW/District/Division interns GS-05 and above, who are covered by either the Housing management, or Engineer and Scientist career program. All nominees should have less than two years DPW experience.

Session	Location	Dates	
2004-1	Alexandria, VA	04/06/2004	04/15/2004
2004-2	Alexandria, VA	08/03/2004	08/12/2004

DPW QA

972 **41DQA01A**
Length: 36 Hours **Tuition: $850.00**

Purpose. This course is for Quality Assurance Evaluators, Contracting Officer Representatives, and other personnel with contract surveillance responsibilities. It incorporates recent DoD guidance addressing techniques for service contracts using Commercial Item acquisition procedures

Description. Through lectures, individual study, and work group activities, this course provides a detailed description of service contract surveillance techniques. Quality terms and definitions are presented and illustrated through the use of examples and practical exercises. Pertinent quality related contract clauses are identified and explained. New DoD procedures which shift the quality assurance focus from oversight to insight are addressed. The concept of partnering with the contractor to validate the contractor's quality control system, establish meaningful metrics, and monitoring of those metrics is explained. Emphasis is on understanding what is needed in terms of contractor management, worker skills, training, processes, procedures, materials, tools, equipment, facilities, and all other elements of quality control. The focus is on fixing the cause of problems identified as well as correcting the defects found. Specific Inspection and acceptance responsibilities are identified. The elements of the Quality Assurance Surveillance Plan are discussed and the need for objective quality assurance data is identified. Sample Surveillance Checklists are provided and the students prepare tailored checklists in class. Surveillance methods are explained and practical exercises are used to illustrate the essential features of random sampling, planned sampling and 100 percent inspection. The use of validated customer complaints and unscheduled inspections are discussed.

Applicable portions of ANSI/ASQC Z1.4, "Sampling Procedures and Tables for Inspection by Attributes" are covered in detail. Usage of several computer based random number generators is demonstrated. Students prepare a government contract quality assurance program using a sample contract as the basis for the work. Various Assurance QA Plan attachments such as surveillance activity checklists, inventory of services worksheets, evaluation worksheets, QA tally checklists, and Contracting Officer Representatives/Quality Assurance Evaluators (COR/QAE) surveillance schedules are prepared. A mock surveillance action is performed and critiqued in class.

NOTE: Attendees need a calculator to benefit fully from the Practical Exercises that are an integral part of the course.

Prerequisites. None. This course is recommended for personnel assigned or to be assigned as Contracting Officer Representatives, Quality Assurance Evaluators, or others with contractor performance monitoring duties.

Session	Location	Date	
2004-1	Huntsville, AL	03/01/2004	03/05/2004
2004-2	Huntsville, AL	04/05/2004	04/09/2004

DPW WORK ESTIMATING

983/CECPW **46DWE01A**
Length: 32 Hours **Tuition: $800.00**

Purpose. This course is for Directorate of Public Works (DPW) Planners and Estimators, Design Engineers, Shop supervisors, schedulers and other personnel responsible for and involved in work order estimating for an installation DPW. The course provides a concentrated look at the Integrated Facilities System (IFS) Work Estimating function as a tool to give preliminary and detailed estimates of projects managed by the DPW.

Description. Through lectures, individual study and class exercises, this class teaches students how to estimate jobs and enter the associated information in IFS. Students will learn how to phase jobs and develop a Bill of Materials. Also covered in this class are the interactions between Work Estimating, and other Integrated Facilities System (IFS) modules, and the importance of the Planner/Estimator relationship with the customer ordering the work and the craft personnel performing the work.

Prerequisites. It is recommended that nominees should have three months experience in job estimating, job scheduling or related fields. Personnel attending should have knowledge of Engineer Performance Standard prior to course attendance. Series: 0300, 0800. Wage Grades (WD, WS and WG) This course is for DPW Installation personnel

Session	Location	Dates	
2004-1	Huntsville, AL	08/17/2004	08/20/2004
2004-2	Huntsville, AL	08/23/2004	08/26/2004

DPW WORK RECEPTION

980/CECPW **46DWR01A**
Length: 24 Hours **Tuition: $800.00**

Purpose. This course is for Service Order Clerks, Work Order Receptionists and Customer Service Personnel or anyone, within the Directorate of Public Works (DPW) on an Army installation or community, who is responsible for receiving the requests and/or processing the customer work requests for an installation DPW. In addition, those who are responsible for responding to work order inquiries to include status information should be included as well.

Description. Through lectures, individual study and class exercises, this class provides students with an overview of the entire DPW function with emphasis on

the reception of work from the customer. Students will learn how to enter service orders and work orders into the (Integrated Facilities System (IFS) and how to answer service order and work order status inquiries from customers. The course will also describe how the IFS informs the work receptionist that a facility is contaminated or that equipment is under warranty. The philosophy that the customer comes first and the fact that all DPW jobs are directly related to customer satisfaction will be stressed. This class provides the students with information on customer satisfaction techniques such as how to determine if the shops are behind schedule so as to keep the customer informed of delays. Techniques that can be used to help customers prioritize their own work requests will be demonstrated. Methods for dealing with irate or rude customers will be covered. Work receptionists will learn review and analysis techniques such as random sampling of customers to determine if the DPW is satisfying the customers. Students will learn how to record the results of random sampling and incidents of specific customer satisfaction or dissatisfaction and how to present these results to management.

Prerequisites. Nominees should have a minimum of 3 months experience of on-the-job experience in the area of customer service. This course is for DPW Installation Personnel.

Session	Location	Dates	
2004-01	Huntsville, AL	03/09/2004	03/11/2004
2004-02	Huntsville, AL	06/15/2004	06/17/2004

DREDGE ESTIMATING

118 **54DGE01A**
Length: 36 Hours **Tuition: $1,960.00**
CEUs: 2.8 **PDHs: 28**

Purpose. This course provides an understanding of cost estimating for dredging projects. Methodology for cost estimating of pipeline, hopper, and mechanical dredging is presented. Training is provided on the use of CEDEP, the offical dredge estimating software program.

Description. Through lectures, discussion, demonstrations and class problems, the course covers the current requirements for the preparation of dredge cost estimates. Specific emphasis is placed on definitions, equipment selection, productivity and cost detail development in the preparation of cost estimates for projects utilizing pipeline, hopper, and mechanical dredges. These principles are further discussed in relationship to the current (upgraded) EXCEL windows version of the CEDEP software.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0800; (b) Grade: GS-07 or above; Nominees are those who have a need to learn more about cost estimates for dredging projects. These employees are envisioned to work in the engineering, operation, planning, or construction divisions of Corps Districts or Divisions. Their educational background should not be less than that of an engineering technician or equivalent. (c) Nominees should be knowledgeable of computer software and computer spreadsheet programs.

Notes. Student supplied calculator required.

Session	Location	Date	
2004-1	Huntsville, AL	04/19/2004	04/23/2004

DREDGE FUNDAMENTALS

333 **54DFM01A**
Length: 36 Hours **Tuition: $2,050.00**
CEUs: 2.5 **PDHs: 25**

Purpose. This course provides the student with fundamental theories and practices involved with the dredging process.

Description. Through lectures, group discussions, examinations, and a field trip, this course teaches the student fundamental dredging theory and accepted dredging practices in addition to basic information on how Corps dredging projects are engineered, managed, and maintained. A brief overview of dredge estimating, dredging safety, hydrographic surveys, and dredging contract administration is also provided. A field trip to see operating dredge equipment is included to help the student understand the material taught in the classroom. This course is a prerequisite for the Dredge Contract Administration Course, and Dredge Estimating.

Prerequisites. Nominees must be assigned (a) Occupational Series: Dredging related; (b) Grade: GS-04 through GM-13. Students should bring clothing appropriate for a field trip aboard an operating dredge, normally located on open water. Safety and/or tennis shoes are acceptable for secure footing on open deck areas. The Corps will provide PFD's, hard hats, and hearing protection. The use of cellular telephones, pagers, laptop computers, or other devices which may cause disruption with the instructors' presentations during the classroom sessions will not be allowed. Use of these items for other than subject matter instruction will be grounds for immediate dismissal.

Session	Location	Date	
2004-1	New Orleans, LA	06/07/2004	06/11/2004
2004-2	New Orleans, LA	06/14/2004	06/18/2004

DREDGE: CONT ADMIN

211 **41DCA01A**
Length: 24 Hours **Tuition: $1,810.00**
CEUs: 1.8 **PDHs: 18**

Purpose. This course teaches the basics of dredging contract administration.

Description. Through lectures, group discussions, case studies, and examination, this course provides the

student with information on how to successfully administer dredging contracts and the problems associated with the activity. Included in classroom discussions is how dredging projects are engineered, the operational aspects of various types of dredges, the factors involved for managing dredging projects, the safety aspects of dredging and dredge equipment, and the procurement techniques and documents used to accomplish the work.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0800, 0810; (b) Grade: GS-07 to GM-14. Individuals who are assigned as project managers, contract administrators or are responsible for dredging contracts in any capacity are eligible to attend. Nominees must have attended the Dredging Fundamentals course prior to attending this course unless this requirement is waived for individual nominees by CECW-OD.

Students should bring a copy of recent dredging plans and specifications to assist with case studies.

Session	Location	Date
2004-1	Huntsville, AL	05/11/2004 05/13/2004

DREDGING FUND (EXP)

754 **54DFM01A**
Length: 16 Hours
Video Run Time: 2 Hours
CEUs: 1.5 **Tuition: $800.00**

Purpose. This course provides students involved in activities related to the National Dredging Program with a basic understanding of the dredging process, engineering for dredging projects, and use of dredging equipment.

Description. Topics include navigation projects, plans and specifications for dredging, dredging equipment, contracts, constructions quality verification, contract estimates, managing river and harbor programs/projects, project justification, and hydrographic surveys.

Prerequisites. Students should work in the area that is involved with the National dredging Program.

DRILLING & SAMPLING

216 **35DSE01A**
Length: 36 Hours **Tuition: $2,890.00**

Purpose. This course provides engineers, geologists, and field inspection personnel with the latest CE and industry methodology for planning, implementing, and evaluating field drilling and sampling projects. It also enhances understanding of methods, mechanics, and products available and evaluates requirements and adequacies of various aspects of these fields. Applicable remote sensing and instrumentation procedures are outlined.

Description. Topics covered are (a) philosophy of field exploration; (b) planning an investigation; (c) drilling methods and machines; (d) effects of sample disturbance on engineering properties; (e) drilling muds; (f) effects of sample disturbance; (g) rock sampling procedures; (h) soil sampling procedures; (i) soil sampling preservation; (j) special excavations; (k) vane shear/cone penetration devices; (l) special devices, optical and geophysical; (m) field permeability (pumping and pressure testing); (n) instrumentation; (o) sampling hazardous materials; and (p) monitoring contracted drilling operations.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0800, 0810, 1310, and 1350; (b) Grade: GS-05 through 12.

Session	Location	Date
2004-1	Huntsville, AL	08/09/2004 08/13/2004

E&D QUALITY MGT

208 **35EQM01A**
Length: 24 Hours **Tuition: $1,340.00**
CEUs: 1.7 **PDHs: 17** **LUs: 17**

Purpose. Improve the quality of projects, products and services, and enhance customer satisfaction by training team members in the principles, processes, and tools of Engineering and Design Quality Management (E&D QM). Emphasize the role of Engineering in the USACE Business Process.

Description. The student will be able to effectively apply E&D QM policies, principles, processes, and tools in planning and design of projects. Emphasis is given to project planning, criteria development, designer selection, project design and review, construction, and operations and maintenance phases. The Civil Works, Military Programs, Support For Others, and Environmental project delivery processes are presented from the perspective of improving technical quality, timeliness and cost effectiveness. The course covers the design of projects by private sector architect-engineers firms and in-house technical personnel. Classroom presentations are supplemented by active classroom discussions and group exercises.

This course covers (a) Introduction to Quality Management and ISO 9000; (b) E&D QM policies and principles; (c) E&D QM during project predesign, design and construction phases; (d) QA/QC policy and Independent Technical Review (ITR) process; (e) E&D QM implementation and quality measurements.

Prerequisites. Grade: GS-07 and above; Series: 0800 and 0340; Corps team members involved with the project delivery process. Customers and employees of other agencies having an interest in Corps E&D QM processes are encouraged to participate.

Session	Location	Date
2004-1	Huntsville, AL	03/17/2004 03/19/2004
2004-2	San Diego, CA	04/26/2004 04/28/2004

EARTHWORK—QV

40 **35EWI01A**
Length: 36 Hours **Tuition: $1,590.00**
CEUs: 2.4

Purpose. This course provides the participant with proper earthwork inspection techniques and improves quality assurance management on construction projects. Insight is also provided as to the technical reasons behind construction requirements and how these requirements contribute to successful construction.

Description. Through lecture, conference sessions, laboratory demonstrations and practical exercises this course covers the field of soils identification, soil sampling and testing, and techniques for earthwork inspection and testing. This course primarily teaches earthwork embankment construction, although some material pertaining to building foundation preparation is included.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0801, 0802, 0809, 0810, 0830, and 0850; (b) Grade: GS-02 to 09. Students should have a current or projected assignment as a general or earthwork construction inspector or related duties at the field level. This course is also well suited for junior engineers as part of the training provided in Engineer-In-Training programs, and for Corps division, district, and field office personnel directly concerned with construction operations. Nominees must not have attended this or a similar course within the past 5 years.

Session	Location	Date
2004-1	Vicksburg, MS	02/02/2004 02/06/2004

ECOLOGICAL RESOURCES

168 **33ERI01A**
Length: 36 Hours **Tuition: $1,720.00**

Purpose. This course provides students with a working knowledge of current techniques and methods that can be used to identify, analyze, and evaluate ecological resources. Emphasis is placed on state-of-the-art procedures for inventory and data collection and evaluation of natural resources required for compliance with Federal laws, Executive Orders, and Corps of Engineers policy and planning guidance. Ecological resources include broadly defined fish and wildlife populations, habitats, and their relationships to each other and the environmental/ecosystem. While the course is not an introductory level course, it is assumed that the student has limited or outdated knowledge of fish and wildlife population dynamics, vegetation sampling, and assessment techniques for these resources.

Description. Corps planning guidance and the "Principles and Guidelines" for planning water resources projects are used as the basis to describe the information required for ecological resources evaluation. Emphasis is placed on describing and demonstrating cost-effective, state-of-the-art techniques and procedures for identifying, inventorying, assessing, evaluating, and displaying ecological resources information. Habitat assessment procedures and inventory techniques are described and demonstrated for birds, mammals, reptiles, amphibians, and fishes. Emphasis is placed on those techniques that can be used to inventory sensitive species and evaluate their habitat or potential habitat. Students receive hands-on training through field trips taken to both terrestrial and aquatic sites where they conduct selected animal inventories and habitat assessments. Students will be provided with key sources of ecological resources information and technical assistance within the Corps, other agencies, and outside sources. Instructors emphasize that ecological resources cross geographic and political boundaries and encourage interdisciplinary and cross-stovepipe collaboration.

Prerequisites. a. This course is primarily for technical personnel whose duties involve the identification, evaluation, analysis or management of ecological resources. Project and Program Managers responsible for project and program management activities, particularly those involving ecosystem restoration, would also benefit. b. Occupational Series: Primarily 0028, 0400, and 1300. c. Grade: GS-09 or above. Disciplines (other than the above) may be accepted provided nominee's present or anticipated duties involve the management, analysis, identification, or evaluation of ecological resources.

SPECIAL INSTRUCTIONS: Much of this course involves field exercises. Therefore, students should prepare to work in both upland and aquatic environments and to bring appropriate shoes and clothing. Special tours may be available after class hours.

Notes. This course contains requirements that are mandatory for course completion and may require an estimated 8 hours of work outside of normal class hours. It is your responsibility to bring this to the attention of your supervisor so that an overtime request can be made by appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

Session	Location	Date
2004-1	Vicksburg, MS	04/26/2004 04/30/2004

ECOLOGY FOR ENGINEERS

103 **33EFE01A**
Length: 36 Hours **Tuition: TBD**

Purpose. This course provides Corps of Engineer personnel with basics and state-of-the-art knowledge of ecology. Students are given an overview of current ecological paradigms and procedures to serve as background for impact analysis, environmental management, and ecosystem restoration.

Description. Understanding and resolving complex environmental issues for assessing impacts of engi-

neering activities, and managing and restoring ecosystems are increaslingly being recognized to require a multidisciplinary effort involving the teaming of ecologists and engineers. The focus of the course will be on integrating basic concepts of ecology with engineering. Terminology, paradigms, goals and basic assumptions particularly for monitoring and modeling will be considered. Lectures on basic ecological concepts and associated case studies will introduce students to current and historical ecological concerns. Exercises with computer-based models and simulations will be used to demonstrate concepts introduced in lectures. The material will be integrated into a consideration of how to apply course material to on-the-job situations. Learning objectives will focus on (1) becoming conversant in current ecological thinking, terminology, and methodology in order to valuably participate in ecosystem management; and (2) being able to identify the conceptual and empirical bases for impacts and restoration at the population, community, ecosystem, and landscape levels.

Prerequisites. Nominees must be assigned: (a) Occupational series: 0800, (b) Grade GS-09 and above. This course is meant primarily for engineers who have duty assignments in planning, engineering, construction, operations or regulatory functions; however, physical scientists, social scientists, attorneys, economists, and other professionals with these assignments and with some background in mathematics may find the course useful.

Session	Location	Date
2004-1	TBD	TBD

ECON ANALYSIS MILCON

101 **5EAM01A**
Length: 28 Hours **Tuition: $1,000.00**

Purpose. This course explains the fundamental principles and procedures for developing economic analyses (E/A) in support of military construction and capital investment projects. The practical application of economic principles is provided through “hands-on” computer training sessions in which participants develop economic analyses using the Army’s economic analysis package, ECONPACK. Economic Analysis is an integral and required justification for military construction projects and capital investment proposals. This course is specifically designed to enable participants to prepare adequate, analytically accurate economic analyses in support of project funding requests to OSD and Congress. Lectures, work group exercises, practical exercises, and computer sessions are used to familiarize participants with the theoretical principles and automated capability to formulate, develop, document, and evaluate E/A.

Description. Specific topics include (a) an overview of economic analysis as it relates to the planning, programming, and review process; (b) the economic analysis process: the logical sequential process used to develop E/A; (c) life-cycle cost analysis: terms and definitions; (d) the concept of equivalence, the time value of money, and the discounting and treatment of inflation; (e) life-cycle cost calculations: net present value, savings-to-investment ratio, discounted payback period; and (f) sensitivity analysis: testing data uncertainties. Students, using the automated system, ECONPACK, will perform calculations, document, and report analysis results. The course covers the automatic transfer of completed economic analyses to a DD Form 1391.

Prerequisites. Nominees must be assigned to current positions involved with planning, preparing, programming, or reviewing requests for government construction or capital investment projects.

Notes. Nominees must bring a pocket calculator to this course. They may also bring an E/A they are currently working on/or have in the processor for review.

Session	Location	Date
2004-1	Huntsville, AL	01/12/2004 01/15/2004
2004-2	Huntsville, AL	08/09/2004 08/12/2004

ECONOMIC ANALYSIS-WRP

270 **35EAW01A**
Length: 36 Hours **Tuition: $1,500.00**

Purpose. This course is designed to provide an overview of the requirements and procedures for conducting economic analysis of Corps of Engineers water resources planning projects. Some form of economic analysis, including benefit/cost analysis, cost effectiveness analysis and or economic impact analysis is required of all Corps projects, whether they be for flood control, navigation, dredging, water supply, environmental mitigation and restoration or other project purpose. The course is designed to help students better understand the Corps planning process and where they, as economist, fit into that planning process. The course will also provide information on how to think about and analyze new problems and situations.

Description. This course includes discussion on (a) the economist’s role in the Corps of Engineers (Who is your audience, your customer? What are your products?); (b) introduction on principles and guidelines — how the economist’s job is influenced by P&G; (c) how to think as a Corps economist in National Economic Development (NED) terms (including new technologies such as risk and uncertainty); (d) evaluation by project purpose using the NED manuals (the incorporation of R&U into evaluation by project purpose); (e) other evaluation techniques (cost effectiveness, incremental cost analysis, economic impact analysis); (f) the changing role of economic analysis: Environmental Restoration, Rehabilitation, Watershed Planning, Section 216; (g) expected problem areas and how to think about them — emphasis will be on with/without project condition, NED vs. Regional, Economics vs. Cost Sharing; and (h) how to plan your work with emphasis on Initial Project Management Plan (IPMP).

OBJECTIVES. Upon successful completion of this training, attendees will be able to (a) define the requirement within P&G for economic analysis in Water Resource Planning; (b) describe the NED concept as defined by the P&G; (c) use the NED Manual Series for project evaluation; (d) identify three different economic analysis techniques; (e) list source information for data required for economic analysis; and (f) list three tools for conducting economic analysis.

Prerequisites. This course is designed primarily for NEW Corps Economists and/or those personnel requiring a basic understanding of what economists do in conducting economic analysis of water resources projects, particularly project managers.

Session	Location	Date	
2004-1	Alexandria, VA	03/08/2004	03/12/2004

ECOSYS PLN/MGT ISSUES

264 **33AER01A**
Length: 36 Hours **Tuition: $1,850.00**

Purpose. This course provides a specialized base of knowledge for effectively dealing with major current ecological resources issues and integrating them into an ecosystem setting. All aspects of land and water resource management are increasingly impacted by evolving technical and political issues. Many issues are applicable to entire regions or the nation, and this course provides a forum for discussing current topics and the potential alternatives for resolving problems. Focus is on the technical underpinnings of issues, recognizing that technical, policy, and procedural topics are intertwined.

Description. Current ecological issues will be presented through a series of seminars, lectures, exercises, and case studies. Issues on the agenda include (a) what is ecosystem restoration and is it ALL good? (b) is the Corps the right agency to do ecosystem restoration? (c) how can we communicate better to do it better? (d) non-monetary and monetary benefit evaluations and justifications, (e) intraagency and interagency goals relative to resources and their conflicts, (f) threatened and endangered species versus diversity, (g) cumulative effects and downstream effects from upstream actions, and (h) evolving demands on public lands. Additional issues will be identified and selected through group forums. Focus is on the relationship of issues to actions and responsibilities required of Corps districts and military installations. Instructors will provide background information on selected topics, and case studies will be used to illustrate planning and management issues in the community, at projects, and at military installations. Students will interact through group forums to discuss and search for alternative resolutions to issues affecting application of ecosystem management concepts in their work. As an illustration of class material covered for issue (b) above, students discuss the Corps and the role of all its elements, ecosystem structure and function at the land and water interface, the Corps' role in introducing and managing disturbance, and what can be expected technically from other agencies with similar programs.

Prerequisites. a. This course is primarily for personnel in Planning, Operations, or Project Management functional areas. Military installation natural resources personnel would also benefit. b. Grade: GS-09 and above. c. A Bachelor of Arts or Science degree or higher. d. Occupational Series: 0100, 0200, 0400, 0801, 0807, 0810, 0819, 0905, 1301, 1315, and 1350.

Session	Location	Date	
2004-1	Lafayette, LA	07/19/2004	07/23/2004

ECOSYS REST/PLAN/EVAL

348 **33EBE01A**
Length: 36 Hours **Tuition: $1,330.00**
CEUs: 3.1

Purpose. Ecosystem restoration is a priority mission in the Corps' Civil Works program. Together, with traditional environmental mitigation work, restoration spans the range of resources from fish and wildlife to watersheds and ecosystems. The formulation and evaluation that leads to restoration projects requires an interdisciplinary approach that also involves local sponsors and other stakeholders. This course explores key issues related to the current practice of ecosystem restoration planning: ecosystem outputs - definition and measurement, resource significance, plan formulation, and cost effectiveness/incremental cost analyses. Case studies will be presented to illustrate current practices.

Description. This course has been redesigned to focus on applying the six-step planning process defined in the Principles and Guidelines and adopted by the Corps. Specifically, this course describes how to conduct an ecosystem restoration study by addressing (1) problems and opportunities, (2) inventory and forecasting,(3) formulating plans, (4) evaluating effects of alternative plans, (5)comparing alternative plans and finally, (6) selecting a recommended plan. Within the context of the six-step planning process, and with a particular emphasis on ecosystem restoration needs, the following topics will be discussed: Authorities for Corps involvement in ecosystem restoration projects; Environmental outputs and tools available for measuring them; The meaning of resource significance and the importance of the evaluation criteria of efficiency, effectiveness, acceptability and completeness in ecosystem restoration; Management measures; How risk and uncertainty factor into ecosystem restoration evaluation; The purpose of Cost Effectiveness and Incremental Cost Analysis; How to formulate jointly for ecosystem restoration(NER) and National Economic Development (NED) benefits. Finally, there will be a discussion stressing the importance of clear and complete documentation in report preparation. NOTE: Although this course addresses evaluation tools and procedures for ecosystem restoration planning, this is not a course in the mechanics of such ecological or habitat modes as HEP, HES or HGM.

OBJECTIVES. Upon completion of this training, attendees will be able to: (a) list important authorities related to ecosystem restoration and mitigation; (b) list the six steps of the planning process; (c) define the importance of resource significance in ecosystem restoration; (d) discuss the need for the evaluation criteria of efficiency, effectiveness, acceptability and completeness in ecosystem restoration; and (e) conduct a simple cost effectiveness and incremental cost analysis for an ecosystem restoration project.

Prerequisites. This course is designed for Corps personnel involved in planning and designing environmental projects, including planners, biologists,economists, outdoor recreation planners, landscape architects, project managers and other water resource planners.

Notes. This is not a course on the use of HEP, HES, or any other environmental evaluation technique but rather a more holistic view of how one should approach the formulation and evaluation of environmental projects proposed in their district.

Session	Location	Date
2004-1	New Orleans, LA	05/10/2004 05/14/2004
2004-2	Albuquerque, NM	06/21/2004 06/25/2004

ECOSYSTEM RESTORATION

280 **33ECR01A**
Length: 36 Hours **Tuition: $1,920.00**

Purpose. The restoration and protection of environmental resources in our Nation's ecosystems is a project purpose in the Corps of Engineers civil works program. This course will provide an interdisciplinary perspective on ecosystem restoration, protection, and management. Students will learn the principles and vocabulary of selected disciplines outside their own and will become familiar with relevant case studies and issues in planning and conducting ecosystem restoration projects. At the end of the course, students will have a more holistic understanding of ecosystems and the requirements for successfully restoring, protecting, and managing them.

Description. Through a series of lectures, practical exercises, and field trips, students will be introduced to basic concepts in ecology, hydrology, geology, and soil sciences as they interrelate within a given ecosystem. These basic concepts will be explored and evaluated for their roles in the restoration, protection, and management of degraded ecosystems. Emphasis will be on ecological interactions and scale-dependent relationships among water, soil, and biota. The structures and functions within an ecosystem will be discussed and related to real-life situations and projects, as appropriate. Relevant models and computerized tools will be demonstrated (e.g., decision support systems, landscape metrics, etc.).

Prerequisites. (a) This course is meant primarily for engineers and scientists involved in the planning, operation, and management of ecosystem restoration projects, including permits under the Clean Water Act that would involve ecosystem restoration; (b) Grade: GS-09 and above; (c) A Bachelor of Arts or Science degree or higher; and (d) Occupational series: 0200, 0100, 0400, 0801, 0807, 0810, 0819, 0905, 1301, 1315, 1350.

Session	Location	Date
2004-1	Vicksburg, MS	05/17/2004 05/21/2004

ELECTRICAL DESIGN I

373 **35ED101A**
Length: 36 Hours **Tuition: $1,760.00**
CEUs: 3.3 **PDHs: 33**

Purpose. This course clarifies criteria and practices to assure an adequate design and review of electrical features of government projects and to improve design quality. The course will develop the complete electrical design of a 40,000 square foot office building, including sizing of service, distribution equipment, feeder and branch conductors, transformers, panelboards, grounding components, fire alarm and fire pump, exterior and interior lighting, lightning protection, energy savings, protective devices, coordination and power requirements.

Description. (a) INTRODUCTION AND DESIGN PROCESS: This session discusses project development and provides an overview of DD Form 1391, design construction and post completion steps, and cost codes. An overview of the site plan, floor plan, and one-line diagram is presented. (b) DESIGN-BUILD: This session will discuss the Design-Build process in general and the development of the electrical requirements for the Request for Proposals (RFP) package. (c) FACILITY CONNECTION/ONE LINE DIAGRAM: This session develops a one-line diagram from the electrical distribution system connection to the building service entrance equipment. Emphasis is on equipment selection and sizing in accordance with DoD criteria, codes, and good engineering practice. Protection and coordination requirements will be discussed. (d) LIGHTING DESIGN: This session includes selection and application of interior and exterior lighting fixtures and emergency and exit lighting systems. Interior lighting calculations (using the zonal cavity method) and exterior lighting calculations (using the point-to-point method) are discussed and demonstrated. (e) ELECTRICAL CALCULATIONS: This session includes calculations for branch circuits and feeders, fire pump motor circuits, and panel schedules; short-circuit currents (using the per-unit system and the point-to-point method), voltage drop calculations, and demand and diversity factors. (f) FIRE ALARM AND LIGHTNING PROTECTION SYSTEMS: This session discusses the specific application of NFPA 72 and 101 to the design of the office building. Placement of notification appliances and signaling devices are determined along with the development of the riser diagram. Also covered is the design of the building lightning protection system using NFPA 780 and TM 5-

811-3. (g) ELECTRICAL POWER SYSTEMS. This session discusses the electrical design requirements for UPS, harmonics, transformers, surge protection, grounding, and emergency power. Energy savings and design considerations will be presented.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0801 (with electrical background), 0850, and 0855. Nominees should be electrical or electronics engineers or have electrical engineering responsibilities. Nominees should have a basic background in the practical applications of electrical and electronic projects.

Notes. Student should bring a calculator and a copy of the current NEC.

Session	Location	Date
2004-1	Reno, NV	02/23/2004 02/27/2004

ELECTRICAL DESIGN II

374 **35ED201A**
Length: 36 Hours **Tuition: $1,750.00**
CEUs: 3.3 **PDHs: 33**

Purpose. This course clarifies criteria and practices to assure an adequate design or review of electrical features of military and civil projects. The course should increase proficiency in the design/review of electrical systems, improve design quality, reduce project cost, and eliminate/reduce field change orders due to design deficiencies during the construction phase to minimize the cost growth.

Description. (a) COURSE OVERVIEW: This session discusses the required steps in the development of electrical system designs for military and civil work projects. (b) POWER SYSTEM CONFIGURATION: This session discusses the methods to configure a power system for reliability. Main emphasisis is on double-ended configuration. (c) ALTERNATE POWER SYSTEMS: This session discusses design requirements for uninterruptible power supply (UPS), standby, and emergency power systems for various types of facilities. (d) ENGINE GENERATOR SET APPLICATIONS: This session acquaints the designer with the components of engine generators and discusses the design parameters and features for engine generator set applications. (e) HAZARDOUS LOCATIONS: This session defines various types and classifications of hazardous locations along with wiring methods employed for each type. It also covers various occupancies which are inherently hazardous by nature of their function as well as electrical requirements specific to each type of occupancy. (f) ELECTRICAL ENERGY SAVINGS: This session discusses the electrical energy conservation system in some detail. Calculations and system design and examples are presented. Examples and calculation of voltage drop, power factor, system voltage, harmonics, linearity, balancing radial/loop systems, overhead/underground, grounding, electrical distribution systems, and other electrical issues are included. (g) FIRE ALARM SYSTEMS: This session includes discussion of the design requirements of signaling and detection circuits. Also included is the design of the fire protective signaling systems based upon NFPA and DOD requirements. (h) HARMONICS: This session discusses the design of electrical distribution systems where non-linear loads exist. The effect of harmonics on linear loads is discussed. Design considerations and options to minimize the effects of harmonics are presented. (i) CATHODIC PROTECTION: This session discusses galvanic corrosion and design of sacrificial cathodic protection systems. (j) CIVIL WORKS: This session discusses electrical systems used in civil work projects including pumps, motors, and controls; water control structures; diesel-engine-driven generators, transfer switches, gate control systems and recreational facilities. (k) WIRING SYSTEMS AND APPLICATION ISSUES: This session discusses wiring and cabling, telephone, and fire protection systems including fiber optic cable applications. (l) AIRFIELD LIGHTING: This session discusses the electrical wiring system requirements for airfield lighting and control. Design issues will be presented and discussed. (m) DESIGN ISSUES: Using knowledge gained in the design course, the students will, with the help of the instructors, improve design quality and cost effectiveness of their projects. Practical examples and design problems will be discussed.

Prerequisites. Nominees must be assigned Occupational Series: 0850, 0855, and 0801 (with an electrical background) or equivalent electrical professions. Nominees should be electrical and electronics engineers with a background in the practical applications of a wide range of electrical and electronic projects.

Notes. Student should bring a calculator and a copy of the NEC.

Session	Location	Date
2004-1	Reno, NV	03/22/2004 03/26/2004

ELECTRICAL EXTERIOR DESIGN

90 **35ESC01A**
Length: 36 Hours **Tuition: $1,860.00**
CEUs: 3.3 **PDHs: 33**

Purpose. This course presents an overview of the basic rules to be followed in the design, construction and maintenance of electrical substations, grounding, switchyards, overhead and underground power and communication lines, and coordination. It provides a sound basis for understanding the intent of the National Electrical Safety Code (NESC), applies the code in practical situations, and presents the Corps' policy and guidance, as documented in technical manuals and guide specifications.

Description. (a) INTRODUCTION: This segment presents the Technical Manuals and Corps of United Facilities Guide Specifications applicable to exterior design. The development, structure and application of

the NESC is also presented in this introductory session. The responsibilities of utility system operators are stressed in the discussion of rules covering the purpose, scope, application and intent of the code. A general discussion of electrical loss versus equipment costs illustrates why different voltage levels are used for different applications. (b) GROUNDING: This portion addresses fundamentals of grounding and a discussion of the grounding rules. The fundamental discussion includes earth grounding, operation of protective equipment, flow of current to the electrode and its transfer to the earth, and electrode effectiveness. Grounding rules cover the point of connection of the grounding conductor, the grounding conductor properties, the means of connection, grounding electrodes and methods of connection, and ground resistance. Special attention is given to the allowed connections between grounding conductors and electrodes serving low-voltage secondary circuits and those serving high-voltage distribution lines and equipment. (c) ELECTRIC SUPPLY STATIONS: This segment presents equipment arrangements in substations including enclosure of equipment and equipment selection. Also emphasized are requirements for protective grounding, guarding of live parts and working space around live equipment. (d) DESIGN, CONSTRUCTION, AND MAINTENANCE OF OVERHEAD ELECTRIC SUPPLY LINES: This portion addresses the design and construction of equipment, grounding, clearances, and strength and loading. The fundamental concepts and requirements of the NESC are explained and discussed in detail. Students learn to work with design/construction information in classroom discussions. (e) DESIGN, CONSTRUCTION, AND MAINTENANCE OF UNDERGROUND DISTRIBUTION SUPPLY LINES: Emphasis is placed on conduit design/construction, supply cable requirements, direct buried cables, risers and terminations, equipment concerns, and tunnels. (f) POWER SYSTEM PROTECTION AND COORDINATION: This segment identifies the nature of short circuits and short-circuit protection philosophy. Protective device coordination will be discussed in the classroom with sample problems. (g) FACILITY DESIGN: This session develops a detailed design of a facility including connections to power station, overhead/underground wiring system, transformers, service equipment, meters, grounding, and protection systems.

Prerequisites. Nominees must be assigned Occupational Series: 0850, 0855 and 0801 (with an electrical background)or equivalent electrical professions. Nominees should have a basic knowledge of the design and/or construction and maintenance of substations, switchyards, and overhead and underground power.

Notes. Students should bring a calculator.

Session	Location	Date	
2004-1	Huntsville, AL	11/17/2003	11/21/2003

ELECTRICAL QUALITY VERIFICATION

42 **35ELC01A**
Length: 36 Hours **Tuition: $1,380.00**
CEUs: 3.0 **PDHs: 30** **LUs: 30**

Purpose. This course provides the participant with (a) requirements and techniques of electrical quality assurance to comply with contract requirements; (b) increased knowledge of materials, equipment, installation, and quality assurance techniques; and (c) training in interpreting plans and specifications and the National Electrical Code.

Description. Through lectures and directed conference sessions, this course presents methods of quality assurance for interior and exterior distribution, motors, controls, lighting, special alarm systems, grounding and hazardous locations, and other electrical installations. It also places emphasis on enforcement of contract requirements, compliance with electrical safety, the electrical code, and the contractor's obligation for quality control under the Corps' quality management program.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0801, 0802, 0809, 0810, 0830, or 0850; (b) Grade: GS-05 or above, and equivalent. Students should have a current or projected assignment as an electrical or general quality assurance representative. Engineers are exempt from these eligibility requirements.

Session	Location	Date	
2004-1	Orlando, FL	07/19/2004	07/23/2004

ELECTRONIC SECURITY SYS DESIGN

360 **55ESS01A**
Length: 36 Hours **Tuition: $1,280.00**
CEUs: 3.2 **PDHs: 32**

Purpose. This course provides a basic understanding of the theory and operation of electronic security systems. The course is recommended for personnel who are involved with force protection, design, or construction of military or civil facilities which require electronic security systems.

Description. This course covers intrusion detection systems, interior and exterior intrusion detection sensors, closed circuit alarm assessment television, and electronic entry control systems. The course covers basic system description and operational theory, application for physical security and force protection, system design information, use of Corps of Engineers criteria documents, and discussion of evaluating and testing installed systems prior to acceptance. Some basic design calculations are included. After completing this course, the student should be conversant in basic interior and exterior sensor application and have a good

understanding of the overall design philosophy and application limitations of electronic security systems.

Prerequisites. Grade: GS-07 (or Military E-5) or higher involved with using, planning, designing, or managing electronic security systems.

Session	Location	Date
2004-1	Huntsville, AL	03/15/2004 03/19/2004

ELECTRONIC BID SOLICIT

437 **41EBS01A**
Length: 20 Hours **Tuition: $1,160.00**

Purpose. This course provides instruction in the preparation of Electronic Bid Solicitations.

Description. Students are instructed in the procedures for the preparation of Electronic Bid Solicitations (EBS). Course topics include the history of EBS, legal issues, advertisement, hardware and software requirements, placing files on the Internet, converting text documents to PDF format, converting CADD files to CALS format, organizing files, creating a master CD, CD reproduction and distribution, and issuing amendments. Hands on exercises guide the student through the entire process of producing an EBS. Demos are presented to show the students EBS web sites and recent projects. After completing the course, the student should be able to prepare an Electronic Bid Solicitation CD.

Prerequisites. Students should be in the 0800 Series: Engineers, Architects and Technicians; 1100 Series: Contracting and Information Management Personnel. Grade: GS-07 or above. They should also have a basic understanding of the bid solicitation process and a working knowledge of computers. Students should have a good general knowledge of using Windows applications, including: Windows Explorer, Microsoft Office (Word, Excel, Access, PowerPoint), Notepad, eMail, and Internet Explorer. Students should also be familiar with basic file management concepts including: Creating, Moving, Deleting, and Saving files and folders.

Session	Location	Date
2004-1	Huntsville, AL	12/09/2003 12/11/2003

ELEVATOR SAFETY—QV

748 **35ELE01A**
Length: 32 Hours
Video Run Time: 2 Hours **Tuition: $950.00**

Purpose. This course provides the participants with theoretical and practical knowledge of the ASME A17.1a requirements relating to elevator inspection maintenance and testing procedures.

Description. The training is organized in the following modules of instruction: (a) Elevators and Escalators; (b) General Requirements; (c) Electric Elevators; (d) Hydraulic Elevators; (e) Escalators and Moving Walks; (f) Auto Transfers and Dumbwaiters; (g) Inclined Elevators; (h) Construction Elevators; (i) Vertical Incline - Wheelchair Lifts; (j) Fire Fighter Service; and (k) Testing. A field trip is recommended to further enhance this course.

Prerequisites. Students should be those persons whose job relates to conveying system design or construction verification. Nominees should be assigned (a) Occupational Series: 0800 and (b) Grade Level: GS-5 to GS-12 or equivalent. Students should have completed the Construction Quality Management (classroom or exportable) course.

ENV IMPACT ASSESS

169 **33EIA01A**
Length: 36 Hours **Tuition: $1,010.00**
LUs: 31

Purpose. This course provides students with a working knowledge of the environmental impact assessment process and the information, including environmental studies, needed to prepare an environmental impact assessment document or an environmental impact statement.

Description. Detailed consideration of the factors to be considered in evaluating the effect of proposed actions upon various aspects of the environment. The data and information required for the environmental evaluation of a major federal action are examined and their sources discussed. Particular emphasis is placed on the physical and chemical factors which can control impacts on biological or cultural resources. The impact evaluation procedures to be followed in complying with the National Environmental Policy Act and with the Procedures and Guidelines for Water Resources Implementation Studies are outlined. Procedures are described and analyzed to assist the preparation and critique of an assessment. Points to be considered in legal challenges are discussed. Coordination and public involvement are addressed. In addition to providing assessment procedures, this course serves as preparation in the physical resource environment for separate courses on ecological and cultural resources.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0020, 0100, 0400, 0800, and 1300 or by demonstration of special needs related to job responsibilities; (b) Grade: GS-05 or above.

Session	Location	Date
2004-1	Huntsville, AL	03/22/2004 03/26/2004
2004-2	Denver, CO	05/17/2004 05/21/2004

ENV LAWS&REG-8HR REF

807 **Length: 8 Hours**

Purpose. This course provides USACE personnel involved with hazardous and toxic waste (HTW) projects

an overview of the application of the comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended by Superfund Amendments and Reauthorization Act of 1986 (SAR); the Resource Conservation and Recovery Act of 1976 (RCRA); and other relevant environmental laws; regulations and policies.

Description. Suggested topics include (a) The legislative and regulatory process of environmental laws; (b) The applicability of CERCLA, RCRA, and other major environmental laws and regulations to HTW site investigation and remediation; (c) The importance of interfacing and regulatory agencies on HTW projects; (d) The CERCLA remedial action process and the RCRA corrective action process; (e) The applicability of various environmental laws and regulations preparing and reviewing HTW predesign, design, and construction documents; and (f) The applicability of various environmental laws and regulations when monitoring contract execution.

Prerequisites. Nominees should be Grade GS-09 or above, directly involved in the hazardous and toxic waste program for USACE. Nominees should have a baccalaureate in engineering, a scientific discipline, or experience in the hazardous and toxic waste program.

ENV REG PRAC APPL

398 **33MEC01A**
Length: 36 Hours **Tuition: $1,560.00**
CEUs: 2.2 **PDHs: 22**

Purpose. This course is designed to further the student's understanding and ability to apply the technical requirements of various major federal environmental regulations. This course consists of a review of the technical application of selected environmental requirements pertinent to compliance issues. It will not consist of an exhaustive, detailed study of environmental statutes and regulations.

Description. This course is comprised of discussions and practical exercises pertaining to the technical application of various environmental regulations such as RCRA waste classification and generator standards, used oil management, NPDES wastewater and stormwater requirements, SPCC plans, PCB management, Clean Air Act regulations, USTs, SWDA requirements, Spill reporting, Pesticide management, Hazardous materials transportation, and EPCRA requirements. The course also includes a brief introductory session on environmental management systems addressed in EO 13148. This course focuses on the practical application of these regulations during day-to-day compliance activities at DoD installations, Corps construction projects and Civil Works Projects and Facilities.

Prerequisites. Nominees must have worked at least one year on environmental compliance projects, environmental projects, military construction projects, or civil works environmental compliance projects or have attended an environmental laws and regulations course within the past three years. Target audience includes engineers, scientists (chemists, industrial hygienists, geologists, etc.), Construction personnel, environmental compliance officers, ECAS and ERGO coordinators, environmental protection specialists, and operations personnel responsible for the technical application of various environmental compliance requirements.

Session	Location	Date
2004-1	Omaha, NE	04/26/2004 04/30/2004

ENV REMED TECH

395 **35GHS01A**
Length: 36 Hours **Tuition: $1,500.00**

Purpose. This course provides the student with a practical understanding of various containment, extraction, and in-situ technologies. The information is intended for use by geologists,engineers, chemists, and other professionals involved in project planning, technology selection, design,operation, and optimization of remediation technologies for in-house projects or oversight of contractor efforts on environmental restoration sites.

Description. The course is a combination of Course #371, Env Remediation Technologies - Sub-surface, and Course #337, Env Remediation Technologies-Containment. The two shorter courses are taught back-to-back and the enrollee in this course would attend both in sequence. The two shorter courses share a common class trip to Rocky Mountain Arsenal. Refer to the descriptions of those two courses for more information. The course emphasizes the awareness and use of available guidance from the USACE, EPA, Air Force, ASTM, and other sources.

Prerequisites. Nominees should be in occupational series 1300 or 0800 or working as an Environmental Protection Specialist or Project/Technical Manager on remediation projects. Nominees must be in grades GS-5 or higher. Courses in soils, hydrogeology, and/or chemistry would be helpful, but are not necessary.

NOTE: Portions of this course can also be taken separately as either the 20 hour course #371, Env Remediation Technologies - Subsurface, or the 20 hour course #337, Env Remediation Technologies-Containment.

Session	Location	Date
2004-1	Denver, CO	06/07/2004 06/11/2004

ENV REMED TECH-CONTAIN

337 **35HRC01A**
Length: 20 Hours **Tuition: $800.00**

Purpose. This course provides the student with a practical understanding of waste containment technologies. The information is intended for use by

geologists,engineers, chemists, and other professionals involved in project planning, technology selection, design,operation, and optimization of remediation technologies for in-house projects or oversight of contractor efforts on environmental restoration sites.

Description. This course offers technical information on the containment technologies listed below. Characterization needs, design, operation, optimization, and close out for these containment technologies are discussed in detail. Concepts are conveyed through lectures, case studies, class problems, and a class field trip. The technologies covered include: Landfill Containment Systems, Solidification/Stablization, Ground Water Collection Trenches, Ground Water Cut-Off Walls, Permeable Reaction Walls, Excavation and Handling of Contaminated Material, Landfarming, and Composting. The course emphasizes the awareness and use of available guidance from the USACE, EPA, Air Force, ASTM and other sources.

Prerequisites. Nominees should be in occupational series 1300 or 0800 or working as an Environmental Protection Specialist or Project/Technical Manager on remediation projects. Nominees must be in grades GS-7 or higher. Courses in soils, hydrogeology, and chemistry would be helpful, but are not necessary.

This course can be taken by itself or as part of the 36-hour course #395 which combines both #371 Environmental Remediation Technologies- Subsurface and #337 Environmental Remediation Technologies - Containment.

Session	Location	Date	
2004-1	Denver, CO	06/09/2004	06/11/2004

ENV REMED TECH-SUBSURFACE

371 **35HRI01A**
Length: 20 Hours **Tuition: $800.00**

Purpose. This course provides the student with a practical understanding of several subsurface remediation technologies. The information is intended for geologists,engineers, chemists, and other professionals involved in project planning, feasibility studies, technology screening, remedial design, operation and optimization of remedial technologies for in-house projects or oversight of contractors on environmental restoration projects.

Description. This course illustrates the underlying processes, site characterization needs, pilot study design, full-scale design approaches, operational considerations and close out strategies for several subsurface remediation technologies. Concepts are conveyed through lectures, case studies, sample calculations, and a field trip to a local environmental restoration site. The technologies covered include: Ground Water Extraction, Soil Vapor Extraction, Multi-Phase Extraction and Fuel Recovery, Air Sparging, Monitored Natural Attenuation, Bioremediation, Thermal Remediation, InSitu, Chemical Oxidation, Surfactant/Co-Solvent Soil Flushing, and Electrokinetics. The course also emphasizes the existence and use of guidance from USACE, USEPA, ITRC, Air Force, DOE, ASTM and others.

Prerequisites. Nominees should be within occupational series 1300 or 0800 or working as an Environmental Protection Specialist or Project Manager on environmental remediation projects. Nominees must be in grades GS-7 or higher. Courses in soils, hydrogeology, and/or chemistry would be helpful, but not necessary.

Notes. This course can be taken by itself or as part of the 36 hour course number 395 which combines both course number 371, Env Remediation Technologies-Subsurface and course number 337, Env Remediation Technologies-Containment.

Session	Location	Date	
2004-1	Denver, CO	06/07/2004	06/09/2004

ENV SAMPLING

225 **33ESA01A**
Length: 28 Hours **Tuition: $1,630.00**
CEUs: 2.5 **PDHs: 25**

Purpose. This course provides students the knowledge and skills necessary to plan and conduct sampling for site characterization and remediation monitoring at hazardous, toxic, and radioactive waste (HTRW) sites. In addition, the students will receive guidance on managing and determining usability of data generated by site characterization and monitoring activities.

Description. The course describes the chemistry and behavior of contaminants typically found at HTRW sites, project planning concepts including preparation of sampling and analysis plans, sampling of soil gas, field analytical techniques, geophysical techniques applicable to HTRW sites, soil sampling, surface water and sediment sampling, monitoring well installation, ground water sampling, pump/slug testing, air sampling, investigation-derived waste disposal, statistical analysis of data, sample packaging and shipping, evaluation of data usability and quality, use of geographic information systems, and QA oversight of contractors performing this type of work. The course is carefully coordinated with existing USACE and EPA guidance and includes demonstrations of some of the sampling techniques.

Prerequisites. Nominees must be assigned to selected series 0800 (e.g., 0810 Civil Engineer or 0819 Environmental Engineer), 1300 (e.g., 1350 Geologist or 1320 Chemist), 0690, 0698, 0028, or be working as a project manager for HTRW projects and be in grade GS-5 or above. Students should have a current or projected assignment related to HTRW projects.

Session	Location	Date	
2004-1	Omaha, NE	05/18/2004	05/21/2004

ENVIRON INTERFACE

770 **33EVI01A**
Length: 8 Hours
Video Run Time: 42 Minutes **Tuition: $375.00**

Purpose. This course trains personnel responsible for planning, programming, and/or implementing installation environmental programs, or providing environmental services to military communities.

Description. Modules of instruction include (a) overview of the Army's environmental vision and strategy, (b) providing district environmental services, and (c) environmental responsibilities of the installation

Prerequisites. Nominees should be installation environmental office staff, ARCOM/MACOM environmental office staff, unique environmental staffs, district project managers, and DPW environmental coordinators.

ENVIRON LAWS & REGS

170 **33ELR01A**
Length: 36 Hours **Tuition: $950.00**
LUs: 31

Purpose. After completing the course, students will be able to (a) list major federal statutes designed to protect the environment*; (b) summarize the major provisions of each federal environmental law and relationship to activities of the Corps of Engineers; (c) find the federal and state environmental statutes and regulations pertinent to a specific Corps activity, given access to a reference library; (d) identify and state legal requirements for environmental protection related to specified Corps activity, given access to suitable reference materials.

Description. This is a general survey course designed for non-attorneys or for attorneys with limited background in environmental law. Topics include federal laws and regulations for environmental protection; pollution standards and variances; congressional and judicial developments; economic and technical difficulties in meeting standards; relation of the Corps of Engineers to state and federal agencies in meeting standards and enforcing laws; methods of monitoring pollution; legal penalties; litigation techniques; the Rivers and Harbors Act of 1899 regulatory provisions; the National Environmental Policy Act (NEPA); Executive Order 11514; the NEPA regulations of the Council on Environmental Quality; the Federal Clean Water Act; the Federal Clean Air Act; the Resource Conservation and Recovery Act; the Toxic Substances Control Act; the Endangered Species Act; the Fish and Wildlife Coordination Act; the Historic Preservation Act; the Noise Control Act; the Federal Environmental Pesticide Control Act; the Coastal Zone Management Act; regulations of the Environmental Protection Agency; and state laws and regulations.

*This course is not intended for personnel primarily involved with hazardous and toxic waste projects and does not include detailed coverage of the Resource Conservation and Recovery Act (RCRA), the Comprehensive, Environmental Response, Compensation and Liability Act of 1980 (CERCLA), or the Superfund Amendments and Reauthorization Act (SARA) of 1986.

This course is ISEERB (Interservice Environmental Education Review Board) approved. It has been reviewed by subject matter experts from DOD Components and found to be suitable to more than one agency.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0020, 0100, 0400, 0800, and 0900; (b) Grade: GS-07 or above. Nominees should have the abilities stated in the Environmental Impact Assessment of Project course.

Session	Location	Date	
2004-1	Huntsville, AL	03/29/2004	04/02/2004
2004-2	Sacramento, CA	05/10/2004	05/14/2004
2004-3	Dallas/Ft. Worth, TX	05/31/2004	06/04/2004
2004-4	Atlanta, GA	06/21/2004	06/25/2004
2004-5	Denver, CO	07/12/2004	07/16/2004

ENVIRON RESTORATION OVERVIEW

350 **56HTR01A**
Length: 20 Hours **Tuition: $1,040.00**
CEUs: 1.1 **PDHs: 11**

Purpose. This is an introductory course for technical and management personnel having responsibilities in USACE Superfund, DERP, and other Environmental Restoration (ER) programs, as well as those of other DoD agencies. This course provides an overview of the Corps' role in ER programs, including programmatic, legal, and technical aspects of hazardous, toxic and radioactive waste (HTRW) site cleanup activities.

Description. The course consists of classroom instruction summarizing USACE management and/or execution of Environmental Restoration (ER) programs such as the Defense Environmental Restoration Program (i.e., Installation Restoration-IRP, Formerly Used Defense Sites-FUDS) Base Realignment and Closure (BRAC), EPA Superfund, USACE-Formerly Utilized Sites Remedial Action Program (FUSRAP), and Support for Others programs. The course addresses the Corps'organizational structure re: environmental restoration, ER project management,contracting strategies, applicable environmental laws and regulations, community relations, ordnance and explosives considerations, environmental risk assessment, worker health and safety, site characterization, environmental monitoring, cost engineering, underground storage tank projects, geotechnical and treatment design technologies, and lessons learned from project design and construction.

Prerequisites. This overview course is intended as an introductory course for technical and management personnel with a current or projected assignment in the

USACE Environmental Restoration programs, or those from other DoD agencies involved in environmental restoration project execution. This course does not satisfy the health & safety training requirements under OSHA 29 CFR 1910.120/29 CFR 1926.65. (a) Target audience: project managers/engineers, chemical engineers, environmental engineers, cost engineers, geotechnical engineers, geologists, risk assessors, toxicologists, environmental scientists/technicians, environmental protection specialists, attorneys, regulatory specialists, chemists, industrial hygienists, health physicists,safety professionals, construction QA representatives, and/or other related technical/management disciplines. (b) Grade:GS-05 and above.

Session	Location	Date	
2004-1	Omaha, NE	05/04/2004	05/06/2004

ENVIRONMENTAL WRITING

198 **53EVW01A**
Length: 22 Hours **Tuition: $1,480.00**

Purpose. This course provides instruction for those who prepare NEPA documents (EIS, EA, Supplements) as part of legislative proposals and feasibility studies to help them save time and develop good strategies for planning, organizing, writing, and revising.

Description. As a result of the classroom instruction and several workshops, students will be better prepared to (a) interpret regulations and procedures relating to NEPA; (b) use the multi-objective, multi-disciplinary planning framework for producing EAs and EISs; (c) organize material such as options and impacts in a logical manner; (d) design graphic displays; (e) show improvement in writing; (f) edit the writings of others; and (g) analyze Corps documents for correct content and readability.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0020, 0100, 0400, 0800, and 1300 or demonstrate special needs related to job responsibilities; (b) Grade: GS-07 or above.

Session	Location	Date	
2004-1	Huntsville, AL	06/15/2004	06/17/2004

ERGO COMPLIANCE

767 **33ERG01A**
Length: 16 Hours
Video Run Time: 43 Minutes
CEUs: 1.0 **Tuition: $375.00**

Purpose. This course trains personnel who may be asked to do environmental compliance assessments for their workplaces or for other areas relative to the U.S. Army Corps of Engineers civil works mission. These assessments will be conducted using the Environmental Review Guide for Operations (ERGO) manual.

Description. Training materials include a 1/2" videocassette, a Facilitator's Guide, and a Student Study Guide. Modules of instruction include (a) Environmental Compliance Requirements, (b) Preparing for the Assessment, (c) Conducting Assessments, (d) Post-Assessment; and (e) Using ERGO as a Proactive Resource.

After completing the classroom portion of this course, a 1-day ERGO onsite assessment should be conducted. The onsite assessment, in conjunction with classroom participation, is mandatory to receive CEU credit.

Prerequisites. Nominees should be facility managers, park rangers, project managers, power plant supervisors, lockmasters, district logistic management officers, real estate personnel, or similar positions.

EST FOR CONST MODS

180 **41ECM01A**
Length: 36 Hours **Tuition: $820.00**
CEUs: 3.4 **PDHs: 34** **LUs: 34**

Purpose. This course provides intermediate level instructions and ready-reference material to assist in improving the participant's ability to prepare a reasonable estimate for a construction contract modification within Corps of Engineers policies and procedures.

Description. Through lectures, conferences, course problems, and case study sessions, this course covers the various elements of a cost estimate (e.g., direct costs, indirect costs, profit, etc.) and the contract provisions and regulations relating to modification estimates. Also covered in the course are the estimating procedures for delays, suspensions, impact, acceleration and review and analysis of contractor cost proposal. The student will be required to complete a detailed cost estimate which will require work to be done after regular class hours. In addition, a mandatory precourse assignment must be completed by the student and brought to the class. A pretest and posttest will also be given.

Prerequisites. Nominees may be from (a) any civilian occupational series or military specialty; (b) Grade: GS-09 or above and comparable military with a current or projected involvement in the preparation, review, or use of construction cost estimates for contract modifications.

Notes. This is not a basic level estimating course. Nominees must have attended the Cost Estimating Basic course (No. 181) or have comparable training or work experience, otherwise a waiver must be processed/approved.

This course contains requirements which are mandatory for course completion and may require an estimated 5 hours of overtime. It is your responsibility to bring this to the attention of your supervisor so that an overtime request/determination can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these require-

ments to your supervisor when you request overtime compensation.

Session	Location	Date	
2004-1	Huntsville, AL	11/03/2003	11/07/2003
2004-2	San Francisco, CA	02/23/2004	02/27/2004
2004-3	Virginia Beach, VA	05/10/2004	05/14/2004

ETHICS AWARENESS-WBT

802
Length: Self-Paced **Tuition: N/C**

Purpose. In accordance with DoD 5500.7-R, Joint Ethics Regulation (JER), the purpose of this course is to serve as an initial ethics orientation of new employees, refresher training for current employees, or annual ethics training as mandated by the employees' local Office of Counsel.

Description. This course provides an overview of the basic rules that guide ethical behavior. Included are those rules addressing conflicts of interest, gifts, travel, outside activities, post employment issues, and misuse of position. Situational vignettes are presented to test the reader's understanding of each major topic. Reference documentation providing the basis for the most common ethics rules will be briefly discussed. If you want to know more, you can see many of the laws, orders, and regulations that serve as the source of the rules discussed here by visiting the sites referenced in this course.

FACILITATOR WORKSHOP

16 **48FAW01A**
Length: 32 Hours **Tuition: $770.00**

Purpose. The PROSPECT Program offers video-based training which is designed for small group instruction at the work site by a local facilitator. The training content, format, and presentation methodology are unique to the Corps. The purpose of this course is to train individuals in the methodology necessary to successfully facilitate this Corps-peculiar training.

Description. Through lectures, demonstrations by instructors, and practical exercises by the students, this course covers local responsibilities for the exportable training, materials organization, presentation methodology, scheduling, reporting requirements, and methods to supplement the prepared training materials.

Prerequisites. Nominees should be assigned (a) Occupational Series: All; (b) Grade: All. This workshop is strongly recommended for anyone responsible for delivering any of the PROSPECT exportable training courses. Nominees do not necessarily have to have subject matter knowledge or expertise in the subject areas to successfully facilitate a course. The facilitator with subject matter knowledge will be more comfortable with the assigned duties, be able to provide better quality training to the students through addition of local flavor to the instruction, and be able to answer unanticipated questions from the students.

Session	Location	Date	
2004-1	Huntsville, AL	02/09/2004	02/12/2004

FIELD SAFETY

236 **55COS01A**
Length: 24 Hours **Tuition: $1,170.00**

Purpose. This course is designed for Corps of Engineers supervisors and/or managers who have responsibility for overseeing contract or in-house construction and operational activities. This 3-day course will provide managers and supervisors with current state-of-art safety technology and methodology as it relates to field work such as earth moving, roofing, mechanical installation, scaffolding and ladders, administrative safety requirements, etc. Through open discussions and group participation, this course will bring together OSHA, Corps of Engineers, and consensus safety standards that apply to typical Corps activities and heighten safety awareness of field managers and supervisors.

Description. The basic references for this course are the Corps of Engineers' Safety and Health Requirements Manual, EM 385-1-1, and pertinent OSHA standards. This 3-day course will provide, through various formats, that information considered necessary and essential for area, resident, and project engineers, operations managers and/or supervisors in the discharging of their day-to-day safety and health responsibilities. This course also has direct application for other Corps of Engineers field personnel in related career fields, e.g., supervisory rangers, drill crew foremen, lockmasters, hired labor supervisors, survey crew leaders, etc. Some of the specific topics covered in this course will include: (a) overview of EM 385-1-1; (b) legal aspects of employee safety for supervisors; (c) administrative safety and health requirements; (d) review of contractor safety submittals; (e) OSHA and the Corps of Engineers; (f) preparation of Accident Prevention Plans; (g) medical surveillance plans; (h) workers compensation program/alternatives; (i) personnel protective equipment; (j) specific safety standards for field work; (k) accident investigation and reporting; (l) confined space requirements; and (m) industrial hygiene programs.

Prerequisites. Nominees must be assigned (a) at the operating level in Corps of Engineers construction and/or operational activities; (b) Grade GS-09 or above; and (c) current or projected assignment as manager, supervisor, foreman, team leader or equivalent.

Session	Location	Date	
2004-1	Denver, CO	05/11/2004	05/13/2004
2004-2	New Orleans, LA	07/13/2004	07/15/2004

FINANCIAL MANAGERS-WBT *NEW*

801
Length: 4 Hours **Tuition: $35.00**

Purpose. This course is designed to provide managers and supervisors an overview of the laws, regulations, and rules of financial responsibility. It discusses the financial requirements for time and attendance, travel orders, labor, or purchasing goods and services.

Description. The Certifying Time and Attendance module discusses the functional objectives of time and attendance and the related manager responsibilities; the Approving Travel Orders module is designed to assist managers and supervisors in achieving good travel management and covers a wide range of conditions and guidelines that can be used for directing travel or approving travel orders and vouchers; the Manage Rates and the Cost of Doing Business module is designed to assist managers in making decisions that are useful in controlling the cost of doing business; and the Approving Micro Purchases module is designed to assist USACE managers in making decisions regarding approval of micro purchases, this module will describe the options available and limitations that managers should understand when approving micro purchases.

Prerequisites. All managers and supervisors responsible for time and attendance, travel orders, labor, or purchasing goods and services

FIRE EXT SYS DESIGN

33 **55FES01A**
Length: 36 Hours **Tuition: $1,890.00**

Purpose. This course teaches the basic knowledge and skills necessary for the design, calculation, and review of automatic fire extinguishing systems. The Corps of Engineers requires personnel involved in fire extinguishing system design to be familiar with all required fire extinguishing systems.

Description. The course covers fixed fire protection systems and design of fire extinguishing systems. After completing this course, the student should be able to design/review most types of automatic fire extinguishing systems. The course will emphasize fire sprinkler design.

Prerequisites. Nominees must meet the following criteria: (a) Occupational Series: Selected 0800, (b) Grade: GS-07 or above; (c) students must be involved in design/construction of fire extinguishing systems as part of their duties or require this knowledge in their work.

Session	Location	Date
2004-1	Huntsville, AL	06/07/2004 06/11/2004

FIRE PROTECTION

6 **55FPE01A**
Length: 36 Hours **Tuition: $1,240.00**
LUs: 31

Purpose. This course teaches architects and engineers the necessary skills and knowledge required to implement the fundamental considerations of fire protection in building design and construction. After completing the course, the student should be able to review basic fire protection analyses and drawings more efficiently.

Description. The course covers basic fire protection for facilities. The course includes instruction on fire-rated construction, building and life safety codes, exit requirements, special hazard protection, and general requirements of fire extinguishing systems, fire alarm and detection systems, and water supplies.

Prerequisites. Nominees must meet the following criteria: (a) Occupational Series: Selected 0800, (b) Grade: GS-07 or above, (c) students should have a current or projected assignment in a safety office, in an engineer design section, in an construction office, or as a project manager with duties which require a technical knowledge of fire protection engineering principles.

Session	Location	Date
2004-1	Huntsville, AL	05/10/2004 05/14/2004
2004-2	Orlando, FL	06/14/2004 06/18/2004

FLEX PAVE CONST—QV

50 **35FPC01A**
Length: 36 Hours **Tuition: $1,540.00**
CEUs: 2.9 **PDHs: 29**

Purpose. This course is designed to identify and discuss the requirements for verifying the production and placement of flexible pavements.

Description. The course covers current Corps of Engineers techniques for quality assurance of all types of flexible pavements, including (a) subgrade, subbase, and base courses; (b) primes, tacks, and seal coats; (c) surface treatment and slurry seals; and (d) plant mixed bituminous paving mixtures. In addition, it covers necessary field tests, interpretation of results, and verification required to assure the production of quality flexible pavements on construction projects. Instruction includes classroom lectures and laboratory demonstrations.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0800, 0801, 0802, 0809, 0810, 0830, and 0850; (b) Grade: GS-05 or above. Students should have a current or projected assignment as a general or asphalt construction quality assurance representative or have related duties at the field level. This course is also well-suited for junior engi-

neers as part of the training provided in Engineer-In-Training programs and for Corps division, district, and field office personnel directly concerned with construction operations. The attendee must not have attended this course or a similar course within the past 5 years.

Notes. This course is also valuable to personnel in other series such as 1102 to see how pavements are designed, tested and constructed.

Session	Location	Date
2004-1	Vicksburg, MS	10/27/2003 10/31/2003

FLOATING PLANT SAFETY

81 **58FPD01A**
Length: 28 Hours **Tuition: $1,230.00**

Purpose. This course provides personnel with current safety and health information with which they will be able to perform required safety and health inspections of Corps of Engineers and contractor owned floating plant and dredging equipment and/or operations. The intent of this training is to familiarize students with pertinent safety and health requirements, including the Corps of Engineers Safety and Health Requirements Manual (EM 385-1-1), US Coast Guard requirements, applicable Codes of Federal Regulations, and other industry standards pertaining to floating plant and dredging equipment and operations.

Description. This course is designed for Corps of Engineers personnel that are assigned to organizational elements that have responsibility for purchasing, maintaining, inspecting, and operating floating plant and dredging equipment and/or operations. Some of the specific areas to be covered in this course, through open discussion, lecture, video tapes, on-site visit, and practical exercises, include the following topics: (a) overview of applicable safety standards; (b) types of floating plant/dredges; (c) in-depth review of Section 19 of EM 385-1-1; (d) reviewing contractor safety submittals; (e) contractual safety requirements and/or specifications; (f) electrical safety on floating plant; (g) fire prevention and required on-board equipment; (h) rigging and hoisting equipment; (i) confined space requirements; (j) Corps diving standards; (k) how to perform safety inspections and record findings; (l) on-board inspection of dredge (practical exercise); (m) accident investigation and reporting; and (n) contingency/emergency operations.

Prerequisites. Nominees should include dredging inspectors, quality assurance representatives, project and resident engineers, safety specialists, managers, and/or engineers, and personnel in other career fields that have an interest in floating plant and dredging safety. Students should have completed the PROSPECT "Dredging Fundamentals" course" (#333) or have a solid understanding of floating plant and dredging equipment and/or operations. Students should bring clothing appropriate for a field trip aboard an operating dredge, normally located on open water. Safety and/or tennis shoes are acceptable for secure footing on open deck areas. The Corps will provide PFD's, hard hats, and hearing protection. A picture ID is required. The use of cellular telephones, pagers, laptop computers, or other devices which may cause disruption with the instructors' presentations during the classroom sessions will not be allowed. Use of these items for other than subject matter instruction will be grounds for immediate dismissal.

Notes. This course contains a requirement of a field trip to an operating dredge. The field trip may run past the 8 hour training day. It is estimated that 4 hours of overtime may be required for this field trip.

Session	Location	Date
2004-1	Portland, OR	02/10/2004 02/13/2004

FLOATING PLANT SAFETY

778
Length: 16 Hours
Video Run Time: 66 Minutes
CEUs: 1.5 **Tuition: $500.00**

Purpose. This course is intended to educate with focus on concepts rather than execution. It provides the student with a basic understanding of floating plant/dredging safety, as well as various types of equipment used in conjunction with floating plant and dredges.

Description. This course consist of the following modules of instruction, roles and responsibilities, dredging equipment, lifting equipment and rigging, personnel considerations, training and personal protective equipment, fall protection, environmental conditions/considerations, diving operations, fire prevention and protection, and hazardous energy.

Prerequisites. Nominees for this course should include personnel that are assigned to organizational elements that have responsibility for purchasing maintaining, inspecting and operating floating plant and dredging equipment and/or operations.

FLOOD CONTROL & COASTAL EMER *NEW*

158
Length: 36 Hours **Tuition: $600.00**

Purpose. This course provides a comprehensive overview of the U.S. Army Corps of Engineers (USACE) Civil Emergency Management Program. The course includes studies of the policy and guidance associated with the USACE Flood Control and Coastal Emergency authority (PL 84-99).

Description. Through lectures, case studies, discussions and exercises, the student receives training in the following areas: USACE emergency responsibilities involving all-hazard natural disaster preparedness, advance measures; emergency operations (flood and post flood response); rehabilitation of flood control

works threatened or destroyed by flood; protection or repair of Federally authorized shore protection works threatened or damaged by coastal storm; and provision of emergency water supplies needed as a result of drought or contaminated sources.

Prerequisites. District and MSC emergency managers must approve nominations. In general, nominees should be: (a) emergency management personnel; (b) functional or technical staff who are currently assigned to/or working in positions with responsibilities related to emergency management, flood control works inspections and maintenance, and emergency response operations. Attendance by other personnel will be determined based on space available in the course. All emergency management personnel should have this course within the first two years of their assignment to the emergency management organization and every three years thereafter as a refresher. Chief, HQUSACE Civil Emergency Management Branch will have final approval authority over all nominations, based on the recommendation(s) of local and MSC emergency managers. As many skills and competencies are involved in planning and conducting emergency operations, there is no specific job series requirement to attend this course.

Session	Location	Date	
2004-1	TBD	11/10/2003	11/14/2003
2004-2	TBD	05/24/2004	05/28/2004

FLOOD CONT CHAN DES

396 **35FCC01A**
Length: 36 Hours
CEUs: 3.2 **PDHs: 32**

Purpose. This course trains civil and hydraulic engineers and selected senior technicians to use the latest Corps of Engineers guidelines and criteria for designing flood control channels.

Description. The course primarily includes instruction and workshop problems on designing flood control channels and channel restoration projects in natural (soft) materials. The course covers design guidance contained in EM 1110-2-1601, "Hydraulic Design of Flood Control Channels" and EM 1110-2-1418, "Channel Stability Analysis of Flood Control Projects." The course also includes the latest design technology and tools on channel design developed under the Flood Damage Reduction Research Program and some instruction on the design of channels for rapid flow conditions. Major topics include (a) review of open-channel hydraulics; (b) review of movable-boundary flood control channels, including fundamentals of fluvial geomorphology and sediment transport; (c) sediment transport equations, sediment impact analysis and sediment budget calculations; (d) methods for designing the geometric shape, width, depth, slope, and roughness of a channel for optimum flood control effectiveness and stability; (e) hands-on workshops using the computer program known as "SAM" for analysis and design of flood control channels; and (f) miscellaneous topics such as rapid flow design considerations, field data requirements, environmental considerations, local inflows and side drainage, and sediment detention structures, and freeboard computations.

Prerequisites. Nominees must be hydraulic engineers or senior technicians with current or planned involvement in the planning or design of flood damage reduction and/or channel restoration projects. Nominees must be assigned (a) Occupational Series: Selected 0800; (b) Grade: GS-07 or above.

FLOOD DAMAGE - GIS

316 **35FDA01A**
Length: 36 Hours

Purpose. This course provides Corps of Engineers hydraulic engineers, economists, study managers, and other water resources professionals with detailed instructions for using the comprehensive set of HEC and IWR analytical tools for performing flood damage reduction studies using Geographic Information Systems (GIS). Participants will gain hands-on experience in the use of the tools by applying them in workshops. Included in the course are: the Flood Damage Analysis (HEC-FDA), Flood Impact Analysis (HEC-FIA), GeoFDA, and IWR-FIAT (with Marshall-Swift options) programs. The course emphasizes the GIS approach for structural inventories and subsequent formulation and evaluation of flood damage reduction plans. The computations and procedures presented are consistent with requirements of ER 1105-2-100, "Planning Guidance Notebook," and EC 1105-2-205, "Risk-based Analysis for Evaluation of Hydrology/Hydraulics and Economics in Flood Damage Reduction Studies."

Description. The presentations and workshop applications associated with the suite of integrated software will feature the use of GIS approaches to aid the analysis and output display of results. Alternative methods for structure inventories will include: grid-cell land use; census block data; spatially referenced business databases; parcels, and field surveys including use of GPS. Analysis examples will demonstrate the use of GeoHMS and GeoRAS for integration of hydrologic and hydraulic data into the flood damage analysis framework. Interactive GIS flood damage calculations for single or user defined groups of structures will be illustrated. Output will be tabular, graphical, and spatial depictions. Plans may also be spatially displayed and compared.

Prerequisites. Nominees should be assigned (a) Occupational Series: Selected 0000-0100, 0800, and 1300; (b) Grade: GS-07 or above. Nominees for the course should be primarily working level professionals; however, supervisory personnel in planning sections or economic analysis sections would benefit significantly by being exposed to modern computational methods.

FLOOD FREQUENCY

123 **35FFA01A**
Length: 36 Hours **Tuition: $1,910.00**

Purpose. This course provides a basic understanding for the correct application of the Interagency Committee on Water Data guidelines on computation of flood flow frequencies. The Flood Flow Frequency Analysis Computer Program is used throughout the course.

Description. This course enables the participant to make technically sound and efficient discharge-frequency estimates. The course focuses on the theoretical basis for frequency analysis, application of techniques contained in the "Guidelines for Determining Flood Flow Frequency," Bulletin 17B, and application of the computer program Flood Frequency Analysis (HEC-FFA). The course is intended for engineers, hydrologists, and others involved in developing discharge-frequency estimates at gaged locations.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0800, 1300, and 1500; (b) Grade: GS-07 or above. Course nominees should be engineers who perform professional work in the fields of hydrology and hydraulics. Nominees should have one or more years of experience in these areas. It is required that course participants be in positions where, in the next year or two, they will be involved in developing frequency curves, performing regional analysis, or determining generalized skew coefficients.

Session	Location	Date	
2004-1	Davis, CA	12/08/2003	12/12/2003

FLOOD WARN PREP PROG

345 **35FWP01A**
Length: 36 Hours

Purpose. This course provides participants with an understanding of Flood Warning/Preparedness Programs and the technical requirements for planning, designing, and implementing these systems. The course emphasizes the roles and responsibilities of local, state, and federal agencies and includes presentation of several case examples.

Description. Flood Warning/Emergency Preparedness Programs are an important response to flood threat. The programs often are an integrated federal/state/local set of activities tailored to a specific local community situation. The Corps can have a significant role in this area. The course offers opportunities to professional staff in flood plain management, hydraulics and hydrology, emergency operations, and civil works planning studies to become knowledgeable in this area. Through lectures and workshops, students explore topics on (a) flood warning/preparedness programs overview; (b) roles of the National Weather Service, the Federal Emergency Management Agency, and others; (c) flood threat recognition systems; (d) data collection and management; (e) warning dissemination and emergency response; (f) Corps emergency operations; (g) plan formulation and evaluation; (h) FPMS Program and flood preparedness; (i) implementation of flood preparedness programs; (j) private sector activities; and (k) many case examples.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0000-0100, 0800, and 1300; (b) Grade: GS-7 or above; (c) a current or projected assignment in formulating/evaluating Flood Warning/Preparedness Programs.

FUND OF GROUTING

217 **35FGR01A**
Length: 40 Hours **Tuition: $2,420.00**

Purpose. This course provides engineers, geologists, and field inspection personnel with the latest CE and industry methodology to plan, implement, and evaluate grouting projects; to enhance understanding of methods, mechanics, and products available; and to evaluate requirements and adequacies of various aspects of these fields.

Description. Topics include (a) basic geotechnical concepts, (b) geologic site investigation for grouting, (c) principles of cement grouting in rock, (d) cement grouting equipment, (e) techniques in cement grouting, (f) compaction grouting and leveling of structures, (g) chemical grouting and site improvement, and (h) microfine cement and grouting.

Prerequisites. Nominees must be assigned Occupational Series: selected 0800 and 1350 and engineering technicians assigned to major construction projects.

NOTE: This course is taught by University of Florida. Location and dates will be selected by the University of Florida.

FUND WETLANDS

272 **33WET01A**
Length: 36 Hours **Tuition: $2,060.00**
CEUs: 2.3 **PDHs: 23**

Purpose. The restoration of fish and wildlife habitat and other wetland functions is a high priority project purpose in the civil works program. Wetlands typically comprise a major portion of the fish and wildlife habitat restoration projects currently being planned by Corps districts. However, additional wetland functions such as improvement of water quality are becoming increasingly recognized for their importance in many Corps' programs. Corps personnel who have no, or only limited, experience or education with wetland ecosystems need to know the fundamental concepts of wetlands science and management. This course provides an introduction and overview of basic wetland ecological concepts and principles in the context of planning and operating civil works environmental and mitigation projects.

Description. Students are provided with state-of-the-art basic knowledge of wetland flora and fauna, hydrology, soils, and ecology. The course emphasizes wetlands functions and values in an ecosystem perspective. Both saltwater and freshwater wetlands will be addressed in the course. The relationship of wetlands to adjacent terrestrial and deep water habitats, along with wetlands succession and dynamics, are discussed. This course provides the base working level fundamentals in the wetlands ecology area and may also serve to update students in current developments in wetlands science. While the focus of this course is not on wetlands delineation or regulatory (Section 404) issues, regulatory personnel would benefit from the broader overview of wetlands ecology.

This course provides instruction in the following topics: (a) wetland hydrology; (b) wetland vegetation; (c) major faunal populations associated with wetlands; (d) wetland plant and animal communities, ecosystem relationships, and dynamic processes; (e) hydric soils; (f) wetland classification systems, including the relationship of such wetland classifications to ecosystems classifications and parameters; (g) principles of wetlands ecology and dynamics; (h) current research in wetlands; (i) evaluation of wetland functions; (j) overview of wetland development, restoration, and constructed wetlands; and (k) open discussion and problem solving.

Prerequisites. Nominees must be: Occupational Series: 0025, 0028, 0110, 0400, 0800, 1300; and Grade: GS-07 and above.

Session	Location	Date
2004-1	Annapolis, MD	06/07/2004 06/11/2004
2004-2	Olympia, WA	08/02/2004 08/06/2004

GENERAL CONSTRUCTION-QV

54 **35GCQ01A**
Length: 37 Hours **Tuition: $950.00**
CEUs: 3.3 **PDHs: 33** **LUs: 33**

Purpose. This course provides the participant with the basic technical knowledge required to verify all elements of building construction, based on guide specifications, and to identify the quality assurance representative's role as it relates to construction quality management.

Description. Through lectures, conferences, and case study sessions, the course covers the subjects of concrete and masonry, safety, exterior and interior electrical systems and components, heating, air-conditioning, plumbing, ventilation, interior and exterior finishes, structural steel and welding, mechanical insulation, sheet metal work, site utilities, soils and compaction, and roofing. An account of the purpose, meaning, and acceptance of contract quality control is included in the session on procedures for monitoring the construction quality management program. The course is directed toward proper and effective quality assurance verification of building construction.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0801, 0802, 0808, 0809, 0810, 0830, and 0850; (b) Grade: GS-05 or above. Students should have a current or projected assignment as a general quality assurance representative, construction representative, technician, or engineer, with quality assurance responsibilities. The fact that this course is oriented to building construction should be weighed when nominating a civil works candidate. Candidates must not have attended this or similar course within the past 5 years.

Notes. This course contains requirements which are mandatory for course completion and may require an estimated 1 hour of overtime. It is your responsibility to bring this to the attention of your supervisor so that an overtime request can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

Session	Location	Date
2004-1	Tampa, FL	10/06/2003 10/10/2003
2004-2	Phoenix, AZ	02/23/2004 02/27/2004

GIS INTERMEDIATE

167 **54GII01A**
Length: 24 Hours **Tuition: $1,830.00**

Purpose. This course provides students who already have basic GIS knowledge with more advanced GIS concepts and issues. The class uses a single data set to reinforce class instruction during a series of hands-on laboratory exercises.

Description. This instruction is designed to provide knowledge of the use of advanced GIS concepts. Specific issues addressed: (a) Data Base Design. What are the best ways to create databases to solve specific problems, avoiding the need to redesign later to rectify deficiencies; (b) Advanced Analytical Methods. Processing methods beyond basic boolean overlay and map algebra will be considered for environmental, water control, and land management applications; and (c) Error. Error types, calculation, and issues related to propagation of error during analysis will be considered. (d) Presentation of Results. Key elements of cartographic presentation are discussed in the context of the preparation of effective GIS maps.

Prerequisites. Students shall have previous instruction or job-related experience in the use of GIS. Nominees should be assigned (a) Occupational Series: 0020-0029, 0100-0199, 0400-0499, 0800-0899, 1170, and 1300-1399; (b) Grade: GS-07 or above.

Session	Location	Date
2004-1	Hanover, NH	05/25/2004 05/27/2004
2004-2	Hanover, NH	06/15/2004 06/17/2004

GIS INTRODUCTION

205 **54GIS01A**
Length: 36 Hours **Tuition: $1,460.00**
CEUs: 2.2

Purpose. This course provides introductory instruction on the use of GIS software/hardware and various data sources to analyze Corps project operations and support decision making.

Description. Instruction is designed to introduce students to the concept of GIS as an integrator of geospatial data and analysis tool emphasizing emergency management, natural resource and environmental applications. Topics include (a) concept and operation of GIS, data entry, storage, display, output; (b) geospatial data structures and advantages of different data structures; (c) compatibility issues; (d) analysis, modeling, QA/QC; (e) how to select a GIS; and (f) related USACE and Federal policies and standards.

Prerequisites. Nominees should be assigned (a) as engineers, planners, biologists, foresters, or surveyors who use digital data to map or analyze projects; (b) Occupational Series: 0020-0029, 0100-0199, 0400-0499, 0800-0899, 1170, and 1300-1399; (c) Grade: GS-07 or above; (d) those whose job responsibilities include the analysis of spatial data and the use of digital data to map or manage Corps projects will find this course useful.

Session	Location	Date
2004-1	Hanover, NH	04/05/2004 04/09/2004
2004-2	Hanover, NH	04/19/2004 04/23/2004
2004-3	Hanover, NH	05/03/2004 05/07/2004
2004-4	Hanover, NH	05/17/2004 05/21/2004
2004-5	Hanover, NH	06/07/2004 06/11/2004

GIS-HYDROLOGIC ENGR

219 **35GIS01A**
Length: 36 Hours **Tuition: $1,800.00**

Purpose. This course provides the basic skills to utilize a Geographic Information System (GIS) to develop data and display results for hydrologic and hydraulic engineering analysis.

Description. This course provides information in lectures and workshops on: (a) GIS concepts and their application in H&H analysis; (b) acquisition of GIS data sets; (c) the National Geospatial Data Clearinghouse, and Corps of Engineers policies on geospatial data and systems; (d) use of GIS data sets and Arc/View with the HEC-HMS for hydrologic analysis and HEC-RAS for river hydraulics; (e) combining H&H results with GIS data sets for flood analysis and planning; and (f) case studies of GIS application in H&H analysis, feasibility studies, and water control.

Prerequisites. Nominees must be assigned (a) Occupational Series: selected 0028, 0029, 0800, and 1300; (b) Grade: GS-07 or above. Some prior experience or GIS training (such as PROSPECT GIS Introduction) is recommended. Arc/Info application experience would be desirable. Student should be in a position to apply GIS methods in the near future.

Session	Location	Date
2004-1	Davis, CA	03/29/2004 04/02/2004

GPS FOR GIS APPLICATIONS

187 **35GOV01A**
Length: 36 Hours **Tuition: $1,310.00**
CEUs: 2.8 **PDHs: 28**

Purpose. This course provides participants with a knowledge of the techniques for integrating field GPS spatial data into CADD/GIS/AM/FM databases. Functional elements supported by this course include: surveying, engineering, construction, navigation, master planning, and facility management.

Description. This course covers GPS/GIS using the Spatial Data Standards principles and applications; related cost factors; CADD/GIS database development; absolute and differential modes; survey applications and procedures; and GPS data collection, reduction, accuracy, and analysis using commercial data bases and GIS software.

Prerequisites. The course is intended for military and civil functional elements involved with facility management, surveying, construction, navigation, mapping, real estate, FM, GIS, etc. Hands-on computer experience required for this course. The course is intended for both professional and technical level classifications. It is open to all grades/series with GPS/GIS responsibilities.

Notes. *For a more in-depth GPS Survey Course, see Surveying IV #203. For a more in-depth GIS course, see GIS Introduction #205.

Session	Location	Date
2004-1	Vicksburg, MS	03/15/2004 03/19/2004
2004-2	Vicksburg, MS	09/13/2004 09/17/2004

GROUNDWATER HYDRO

124 **35GWH01A**
Length: 36 Hours **Tuition: $2,000.00**

Purpose. This course provides concepts, procedures, and techniques employed in the analysis, investigation, and management of groundwater hydrology problems.

Description. The course focuses on applied groundwater hydrology for the purpose of planning and evaluation. Topics include the occurrence and movement of groundwater, well hydraulics, site characterization surface and groundwater interaction (and groundwater

modeling). Hand methods and computer techniques are presented as methods of analysis.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0810 and 1300; (b) Grade: GS-07 or above. A basic level of understanding is required in hydrology, hydraulics, and geology. One or more years of professional work experience in hydraulics, hydrology, geology/foundations, or water resources planning meets this basic level of understanding. In addition, course participants must be in positions or anticipate being in positions where they will be involved in groundwater studies within the next year or two.

Session	Location	Date
2004-1	Davis, CA	07/12/2004 07/16/2004

GROUNDWATER MODELING

108 **54GRM01A**
Length: 36 Hours

Purpose. This course provides the student with an understanding in the conceptualization, construction, and application of computer models in the simulation of groundwater flow. This course serves as an introduction for Corps personnel interested in hands-on applications. Additionally, project managers are provided with an enhanced understanding of the development, application, and limitations of computer models of groundwater flow.

Description. Computer models of groundwater flow are applied to a variety of projects within the Corps of Engineers. This includes HTRW clean-up, water resource management, channel design, salt-water intrusion, interaction between surface water and groundwater, reservoir design and operation, and watershed management. The course focuses on the development and application of computer models for the purpose of planning, design, operation, and evaluation. Topics include: site characterization and conceptual model development, integration of data into a computer model, selection of boundary conditions, model calibration, model application, common errors in computer modeling, and limitations of computer modeling. The industry-standard U.S. Geological Survey finite-difference three-dimensional groundwater flow model MODFLOW will be introduced to course participants through lectures and computer workshops. A companion particle-tracking computer program MODPATH will also be introduced. Workshops will give students an understanding of MODFLOW file structure, application experience, and output analysis. The Department of Defense Groundwater Modeling System will be introduced as a preprocessor for more complex applications. Participants will be provided with a course binder, documentation for MODFLOW, and a set of example problems and solutions for use of MODFLOW. Additionally, all Department of Defense (including Corps of Engineers) employees will be provided with documentation and downloading instructions for the Groundwater Modeling System (GMS).

Prerequisites. Nominees must be (a) assigned to Occupational Series 0400, 0800, or 1300 series personnel; and (b) Grade GS-07 or above. A basic level of understanding of hydrogeology is required. Completion of the PROSPECT course entitled "Groundwater Hydrology" meets this requirement. In addition, course participants must be in positions, or anticipate being in positions where they will be involved in groundwater related studies within the next year or two.

H&H FOR DAM SAFETY *NEW*

320
Length: 36 Hours **Tuition: $2,210.00**

Purpose. Computation of inflows to a reservoir and flows through the dam and downstream are critical to assessing the safety of the dam and potential flood problems downstream. Current training available to hydrologic and hydraulic engineers deals with development of historical and design storms for flood and conservation storage and day-to-day operational events. This course provides needed guidance in the evaluation of extreme events related to dam safety. With the aging infrastructure of Corps dams, the need for analysis tools and engineers trained to properly use the tools is expanding.

Description. Through a series of lectures and hands-on workshops, the students will learn about the development of extreme storm events and hydrologic and hydraulic analysis methods using HEC-HMS and HEC-RAS software to simulate inflow design floods to assess spillway adequacy, and to evaluate dam-break consequences. Other topics will include severe storm magnitude and sequence analysis, hydrologic simulation of inflow to dam and in downstream tributaries, spillway sizing and operation, hydraulic calculations of flow through dam outlets, including breaches, and hydraulics of downstream flows.

Prerequisites. Nominees must be assigned (a) Occupational series: Selected 0800 and 1300; (b) Grade: GS-07 and above; (c) Prior courses: Basic HEC-HMS (#178) and HEC-RAS (#114) or equivalent knowledge; and (d) Familiarity working in a Windows-based computer system environment.

Session	Location	Date
2004-1	Davis, CA	08/02/2004 08/06/2004

HAP EXP

773 **49HAP01A**
Length: 12 Hours
Video Run Time: 42 Minutes **Tuition: $340.00**

Goal. This course provides real estate personnel with specific training on the basic requirements to be followed when establishing and administering the Department of Defense Homeowners Assistance Program (HAP).

Purpose. The purpose of this course is to provide specific training to division and district staff with military real estate responsibilities regarding rules and procedures governing the HAP program.

Description. The training materials include one 1/2" videocassette, a Facilitator's Guide, and a Student Study Guide. Major topics covered in this course are: (a) Economic Impact of an Installation; (b) Eligibility of Applicants; (c) Application Processing Procedures; (d) Benefits of Private Sale, Government Purchase, or Foreclosure; (e) Acquisition and Closing Procedures; (f) Appeals Process; and (g) Income Tax Consequences.

Prerequisites. The student should have a general knowledge of real estate functions and be assigned to or expected to be assigned to a position that requires an understanding of the DOD HAP. These personnel are normally in Occupational Series: 0905, 1101, 1170, or 1171.

HAZWOPER 8HR REF

793
Length: 8 Hours
Web-Based: Self-Paced **Tuition: $110.00**

Purpose. This course is for United States Army Corps of Engineers' employees responsible for remediating the clean-up of Superfund, former defense, and military installation hazardous waste sitesm as well as, respond to emergencies involving the release of hazardous materials. They are required by law (29 CFR 1910.120) to attend an 8-hour annual refresher training on Hazardous Waste Operations and Emergency Response (HAZWOPER) course to continue employment at treatment, storage, and disposal facilities (TDSs) and at hazardous waste clean-up sites.

Description. The HAZWOPER refresher training course includes an overview of changes and updates to federal regulations, toxicology, and hazard communicatino. it also covers updates and changes in hazardous waste site safety plans, site control, decontamination, hazardous waste management, personal protective clothing and quipment, and respiratory protection.

Topics include:
(a) Review of laws and regulations;
(b) Names of personnel and alternates responsible for site safety and health;
(c) Safety, health and other hazards present on the site;
(d) Use of personal protective equipment;
(e) Work practices by which the employee can minimize risks from hazards;
(f) Safe use of engineering controls and equipment on the site; and
(g) Medical surveillance requirements, including recognition of symptoms and signs which might indicate overexposure of hazards.

Prerequisites. a. Students must have taken the initial 40-hour HAZWOPER course that meets the requirements of 29 CFR 1910.120 and 1926.65. The student's supervisor shall verify this before enrollment in the course. b. The student's supervisor shall also verify that the student's 8-hour annual training is current (the student must have had an annual refresher within the last three years; otherwise, the refresher course can not be taken without prior approval from the local District Chief Safety and Occupational Health Office per USACE policy.) c. The supervisor shall also verify the student to be compliant with the following HAZWOPER training requirement contained in 29 CFR 1910.120 and 1926.65 prior to taking the web-based refresher course: (1) employer safety meetings relevant to duties the student is to perform; (2) reviews and critiques of incidents that have occurred int he past year pertinent to the work performed; (3) informational programs or safety meetings to address hazards and protective measures specific to a particular hazardous waste site or job task; (4) review of the Site Safety and Health Plans (SSHPs) and be familiar with personnel/alternates responsible for site safety and health for the project sites where the student is/will be assigned and; (5) hands-on skill exercises relevant to the selection, use and maintenance of Personal Protective Equipment.

HIST STRUCTURES I

392 **35HIS01A**
Length: 36 Hours **Tuition: $1,890.00**
CEUs: 2.8 **PDHs: 28** **LUs: 28**

Purpose. This course provides an awareness of the unique characteristics, legal requirements, procedures, technical knowledge, and skills necessary to administer, maintain and repair historic properties of the Federal Government.

Description. Guidance: Laws, Regulations, Secretary of the Interior's Standards, and Criteria and Guidance. Identification and Documentation of Historic Fabric. Maintenance Issues: Inspection and Diagnostics, Maintenance Types and Cost, and Execution of Minor Maintenance and Repair. Design Issues: Exterior Finishes, Interiors, Life Safety and Accessibility, Seismic Design, Historic Landscape Preservation, Material Life Cycle Value, and Energy Conservation and Engineering Support Systems. Procedures: Design, Procurement, Execution-Treatment Issues. Field Trip: Treatment Techniques. Making Choices: Case Studies in Interpreting Preservation Guidelines.

Prerequisites. Nominees should be assigned (a) Occupational Series: 0020, 0023, 0025, 0028, 0170, 0193, 0301, 0341, 0342, 0343, 0401, 0408, 0800, 1005, 1008, 1170, 1171, 1173, 1176, 1300, 1301, 1640, 1910, 1960, or other series with cultural resource responsibilities; (b) Grade: GS-07, WG-11, E-6, O-1, or above. Attendees should have a minimum of one year experience in their organization prior to attending this course. Each session will attempt to approximate a mix between installation and USACE personnel. Typical USACE

functions appropriate to this course include engineering, project management, construction, contracting, and real estate. Typical installation functions include engineering plans and services, family housing, operations and maintenance, engineering resource management, and environment.

Notes. This course requires completion of all class activities to receive a certificate. Approximately 2 hours of overtime may be required to complete the field trip on day four. The student is responsible for bringing this to the attention of his/her supervisor so that an overtime request/determination can be made prior to course attendance. Certification of the amount of time expended on these requirements to supervisors, when requesting overtime compensation, is also the student's responsibility.

MANDATORY. Slide Show Information: Each course participant is required to bring with them no more than three (3) 35mm slides. The slides are used in an introduction session Monday morning. Each participant will be asked to say a few words from their seats about the images. Slides should represent a participant's involvement with historic preservation on their respective installations. Examples might include past projects, success stories, or problems areas. This is a networking and ice breaking activity. Hand in slides at registration Sunday evening or first thing Monday morning before session begins.

This course is ISEERB (Interservice Environmental Education Review Board) approved. It has been reviewed by subject matter experts from DOD Components and found to be suitable to more than one agency.

Session	Location	Date
2004-1	Seattle, WA	03/22/2004 03/26/2004

HIST STRUCTURES II

163 **35HS201A**
Length: 36 Hours **Tuition: $1,470.00**
CEUs: 2.5 **PDHs: 25** **LUs: 25**

"This course will only be offered every three years"

Purpose. This course provides craft skill training for technicians and constructions inspectors involved with maintenance, preservation, and rehabilitation of historic structures. Skills training is best offered in the context of craft enhancement, identification of historic fabric, and application of craft skills to the special needs of historic preservation in the Federal government.

Description. This course provides twelve hours of classroom training on the following subjects: (a) Secretary of the Interior Standards and Guidelines; (b) Levels of treatment; (c) Character defining features; (d) Preservation of historic fabric, Repair versus Replacement; (e) Tools and tool marks; (f) Deterioration of roofing and flashing, paint, wood, and masonry (causes and cures);

This course also provides twenty-four hours of skills training. This is a 3-day field exercise working with and taught by experienced craftsmen on an actual and ongoing historic preservation project. Field groups are assigned in the three speciality areas of carpentry, painting, and masonry.

Classroom training utilizes slides, power point presentations, video tape, and viewgraphs. Craftsmen are requested to bring work clothes and tools to the course to facilitate the work exercise training.

Prerequisites. Nominees must be assigned (a) Occupational Series: GS: 0800, 1910, 1960; WG: 3603, 3605, 3706, 4102, 4604, 4605, 4607, 4618, 4749, and 5318; (b) Grade: GS-07 , WG-11, E-6, O-1 or above. Attendees should have a minimum of one year experience in their organization prior to attending the course. Typical installation functions include family housing maintenance and DEH/DPW operations and maintenance. Typical USACE functions include design specifications and construction inspection.

Notes. Each course participant is requested to bring with them no more than three (3) 35mm slides. The slides are used in an introduction session Monday morning. Participants are asked to say a few words from their seats about the images. Slides should represent a participant's involvement with historic preservation on their respective installations. Examples might include past projects, success stories, or problem areas. This is a networking and ice breaking activity. Hand in slides at registration Sunday evening or first thing Monday morning before session begins.

Session	Location	Date
2004-1	TBD	04/19/2004 04/23/2004

HIST STRUCTURES III *NEW*

105
Length: 24 Hours **Tuition: $890.00**

Purpose. The purpose of this course is to take information learned in Historic Structures 1, and apply them to the development of typical historic preservation projects. The format would be case studies pursued as a three-day planning charette sheparding the development planning and programming of a historic preservation project. Course will emphasize: Preservation & Federal regulations, Secretary of the Interior Standards, consultation with State Historic Preservation Officers, to develop a detailed design program.

Description. Course will emphasize the roles of project development team members. Roles will include program/project management, cost engineering, design, functional user, maintenance & repair, fire protection, force protection, sustainable design, cultural resources, and SHPO. This course will focus on how to plan and program Historic Structures renovation and maintenance projects at the installation level and civil works project locations.

Prerequisites. Nominees include Occupational series 0020, 0023, 0025, 0028, 0170, 0193, 0301, 0340, 0342, 0408, 0800series, 1008, 1170, 1171, 1173, 1176, 1301,

1640, 1910, 1960. Persons involved in any of the above-specified roles are eligible. Persons are expected to have one-year experience in the above-specified roles or series. A basic knowledge of historic preservation laws such as, Introduction to Section 106, or Historic Structures Maintenance and Repair is recommended.

Session	Location	Date	
2004-1	Virginia Beach, VA	03/02/2004	03/04/2004

HQ MAINT/LERT TNG

796 **Tuition: TBD**

Purpose. Under Development

Description. Under Development

Prerequisites. Under Development

HTRW CONST INSP

141 **56HCI01A**
Length: 36 Hours **Tuition: $1,850.00**
CEUs: 2.7 **PDHs: 27**

Purpose. This course is for working level and management personnel having responsibilities in the USACE Superfund, DERP, and other Hazardous, Toxic, and Radioactive Waste (HTRW) programs. It provides a comprehensive overview of responsibilities and acceptable work practices for Quality Assurance Representatives (QAR) and supervisors on HTRW construction sites. The course provides information to allow the QAR to effectively perform his job in determining if contract work performed, testing, etc., complies with relevant federal, state, and local standards and with the contract documents. This course focuses on QAR activities beginning with Biddability, Constructibility, Operability (BCOE) reviews; through mobilization and preconstruction; construction activities; final cleanup/demobilization; and operation and maintenance (O&M).

Description. Through lectures, lessons learned, and case studies, this course provides instruction in the following areas: (a) environmental laws and regulations; (b) field monitoring activities including Chemical Data Quality Management, removal containment, and treatment systems; (c) overview of removal, containment, and treatment systems technologies, including surface water control, collection and injection of groundwater, excavation/on-site treatment of soil, collection and disposal of wastes, underground storage tank management, and soils and geotextiles; (d) sampling and testing procedures, interpretation of test results; and (e) health and safety in field activities including work practices to minimize risks for both on-site and off-site personnel and site-specific safety and health plans.

Prerequisites. This course is for working level and management personnel with a current or projected assignment in the USACE HTRW program.

Session	Location	Date	
2004-1	Virginia Beach, VA	05/24/2004	05/28/2004

HVAC CONTROL SYSTEMS: DESIGN

340 **35HVC01A**
Length: 36 Hours **Tuition: $1,250.00**
CEUs: 3.1 **PDHs: 31**

Purpose. This course is intended for HVAC control system designers responsible for the design, specification, and construction of direct digital control (DDC) systems for HVAC and other building-level controls systems. The focus is on LONWORKS technology which is based on an open-standard multi-vendor communications protocol that supports base-wide monitoring and control functions.

Description. This course provides the HVAC control system designer with the knowledge necessary to develop a project design and specification for building-level direct digital controls capable of being interfaced with a base-wide utility monitoring and control system (UMCS). Subjects include: (1) Applied control theory, (2) Control hardware, loops, setpoints, and systems, (3) LONWORKS technology, terminology, devices, and functions, (4) LONWORKS architecture, system networking, and interfaces, (5) LONWORKS Network Services (LNS), (6) Systems Integration (7) Supervisory functions and operator interface (alarms, scheduling, trending), (8) LONWORKS points schedule assignments, (9) LONWORKS multi-vendor product support and availability, (10) DDC software packages and requirements, (11) LONWORKS demonstration, (12) Calculations, sizing, and selections, (13) Project implementation, (14) Base-wide DDC master planning

Prerequisites. This course is intended for individuals performing HVAC control system design.

Notes. While this course is intended for designers, non-designers may find the course beneficial. There are related PROSPECT courses intended specifically for operation and maintenance staff and construction quality verification staff.

Session	Location	Date	
2004-1	Champaign, IL	10/20/2003	10/24/2003

HVAC CONTROL SYSTEMS: O&M

246 **72HOM01A**
Length: 36 Hours **Tuition: $1,260.00**
CEUs: 3.1

Purpose. This course provides instruction on the operation and maintenance of conventional direct digital control (DDC) for building-level HVAC systems.

Description. This course provides instruction on the operation and maintenance of conventional DDC systems. The training is not specific to any single vendor's DDC system. The instruction is generic and intended to

be applicable to any vendor's hardware and software, but several different vendors DDC systems, hardware, and software will be described. The instruction includes: (1) Applied HVAC control theory, (2) Control systems, loops, and hardware, (3) Systems details (including but not limited to VAV systems and VAV boxes), (4) Reading schematics and diagrams, (5) Controller settings and adjustments, (6) Control loop diagnosis and trouble shooting, (7) DDC system architectures, hardware, and software, (8) LONWORKS introduction and basics, (9) Coordination with Designers and Construction Quality Verification staff, (10) Performance Verification Testing (PVT) and system acceptance, (11) Demonstrations and hands-on lab sessions.

Prerequisites. This course is intended for individuals performing HVAC control system operation and maintenance. Construction Quality Verification staff will also benefit from this course.

Session	Location	Date
2004-1	Champaign, IL	04/19/2004 04/23/2004

HVAC CONTROL SYSTEMS: QV

382 **35HQV01A**
Length: 36 Hours **Tuition: $1,250.00**

Purpose. This course is intended for quality verification staff responsible for the installation of direct digital control (DDC) systems for HVAC and other building-level controls systems. The focus is on LONWORKS technology which is based on an open-standard multi-vendor communications protocol that supports base-wide monitoring and control functions.

Description. This course provides the construction inspector with the knowledge necessary to perform quality verification inspection (DDC) systems based on LONWORKS technology. Subjects include: (1) Applied control theory, (2) Control hardware, loops, setpoints, and systems, (3) LONWORKS technology, terminology, devices, and functions, (4) LONWORKS architecture, system networking, and interfaces, (5) LONWORKS points schedule assignments, (6) LONWORKS multi-vendor product support and availability, (7) DDC software packages and requirements, (8) LONWORKS demonstration, (9) Submittal review (10) Performance verification testing.

Prerequisites. This course is intended for individuals performing HVAC control system construction quality verification. This course is similar to the HVAC Control Systems: Design course, but provides a somewhat less detailed coverage of LONWORKS Technology. It focuses more on the inspection and testing aspects of DDC systems based on LONWORKS technology. It is recommended that you do NOT take both this course and the HVAC Control Systems: Design course. In addition to the HVAC Control Systems: QV course, Construction Quality Verification staff would also benefit from the HVAC Control Systems: O&M course which is geared more towards conventional DDC, in lieu of DDC systems based on LONWORKS technology.

Session	Location	Date
2004-1	Champaign, IL	05/10/2004 05/14/2004

HVAC DESIGN: BASIC

391 **35BHV01A**
Length: 36 Hours **Tuition: $1,530.00**
CEUs: 3.3 **PDHs: 33**

Purpose. This course provides instruction on the fundamentals of HVAC design including appropriate Corps of Engineers criteria.

Description. This course presents topics on (a) heating and cooling load calculations; (b) psychrometrics; (c) duct design; (d) hydronic system design; (e) equipment selection; (f) sizing and layout; (g) criteria sources; and (h) indoor air quality.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0800 through 0855; (b) Grade: no limitations; (c) current or projected assignment as an HVAC design engineer or mechanical engineer with limited or no design experience. The course provides an overview of HVAC design for non-mechanical engineers.

Session	Location	Date
2004-1	Phoenix, AZ	11/03/2003 11/07/2003
2004-2	Virginia Beach, VA	05/17/2004 05/21/2004

HVAC SYSTEMS COMMISSIONING

327 **35MSC01A**
Length: 36 Hours **Tuition: $1,680.00**
CEUs: 3.0 **PDHs: 30**

Purpose. This course provides practical technical information to fulfill construction quality verification duties for commissioning of mechanical systems. The course identifies procedures for startup, sequence of operation, and testing that pertain to mechanical equipment and repetitive deficiencies in system performance.

Description. Through lecture, visual aids, conferences, and testing, this course presents the following mechanical HVAC subjects: commissioning of mechanical systems, cooling systems, heating systems, air side systems, and control systems. A 2-day lab experience is included where students observe proper performance testing of HVAC Systems.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0801, 0802, 0809, 0810, 0830, and 0850; (b) Grade: GS-05 through GS-12; (c) a current or projected position as an engineer, engineering technician, construction representative, or resident engineer with mechanical quality assurance (directly or supervised) responsibilities. Nominees should have completed the exportable course, the PROSPECT Quality

Verification: Mechanical course or have experience in mechanical quality assurance at least equivalent to the basics presented therein. Engineers are exempt from these requirements.

Session	Location	Date
2004-1	Phoenix, AZ	03/29/2004 04/02/2004

HVAC SYSTEMS TEST, ADJ & BAL-QV

68 **35TAB01A**
Length: 36 Hours **Tuition: $1,550.00**
CEUs: 3.0 **PDHs: 30**

Purpose. This course provides quality assurance personnel in the field with an understanding of HVAC systems functions and the testing, adjusting, and balancing relationships of the complete system.

Description. The course teaches the necessary skills and knowledge to evaluate system installation and system testing, adjusting, and balancing. The course includes a 2-day lab exercise that demonstrates technical material necessary for field technicians and field engineers to perform quality verification.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0801, 0802, 0809, 0810, 0830, and 0850; (b) Grade: GS-07, WG-09, or above. Five years of quality assurance experience as a mechanical technician or general quality assurance representative is recommended.

Session	Location	Date
2004-1	Phoenix, AZ	11/17/2003 11/21/2003
2004-2	Phoenix, AZ	01/12/2004 01/16/2004

HW MANIFEST/DOT CERT

223 **56HWM01A**
Length: 36 Hours **Tuition: $1,590.00**
CEUs: 3.4

Purpose. This 36-hour course provides initial training regarding regulatory requirements of the Hazardous Materials Transportation Act (HMTA) and the Resource Conservation and Recovery Act (RCRA) as it applies to the generation, transportation, and disposal of hazardous waste. It enables employers to certify that as required by 49 CFR 172 Subpart H, that their employees have been trained and tested on general awareness and function specific elements described below. In addition, this is a DoD approved course as per DoD 4500.9-R, Oct 99. (Note: Certain RCRA and safety related training elements required by 49 CFR 172 Subpart H and 40 CFR 265.16 are typically site-specific and must be performed on the job.

Description. Training topics cover the identification and classification of hazardous wastes for purposes of preparing a hazardous waste manifest and fulfilling the DOT requirements for shipping hazardous wastes. Specifically, training topics include RCRA waste classification, land disposal restrictions and notification, generator requirements, manifesting requirements, identification of a DOT Reportable Quantity, use of the Hazardous Materials Table, DOT requirements for determining a shipping name, properly packaging, labeling, marking and placarding, and DOT emergency response requirements. In addition, the course addresses special EPA and DOT requirements for shipping asbestos and PCBs.

Prerequisites. This course is primarily targeted at persons in the following series: 0820, 0809, 0810, 0819, 0028, 0029, 0025, 0026, 0401, 1350, 1301, 0893, 0830, 1306, and 1320 (All series involved with environmental programs, including all engineers, chemist, industrial hygienists, health physicists, biologists, geologists, hydrogeologists, program managers, planners, etc.) as well as all Civil Works Environmental Compliance Coordinators and Civil works personnel required to sign hazmat shipping documents and/or hazardous waste manifests. The training is designed for persons with any of the following job responsibilities: identification of proper shipping names for hazardous wastes in accordance with DOT regulations; selection of appropriate packagings, marking, labels and placards in accordance with DOT regulations; RCRA waste identification and classification; completion or review of hazardous waste manifests and/or land disposal restriction notifications; preparation of shipping documents for used oil, asbestos and PCBs; shipping of analytical samples; loading or unloading of hazardous wastes; and transportation of hazardous materials in general. Target audience also includes all Civil Works Environmental Compliance Coordinators and Civil Works personnel required to sign Hazmat shipping documents and/or hazardous waste manifest.

Session	Location	Date
2004-1	Huntsville, AL	02/23/2004 02/27/2004

HW MANIFEST/DOT RECERT

429 **56HWR01A**
Length: 12 Hours **Tuition: $600.00**

Purpose. This 12-hour course provides recurrent training regarding regulatory requirements of the Hazardous Materials Transportation Act (HMTA) and the Resource Conservation and Recovery Act (RCRA) as it applies to the generation, transportation, and disposal of hazardous waste. It enables employers to certify as required by 49 CFR 172 Subpart H, that their employees have been trained and tested in general awareness and function-specific elements described below. In addition, this is a DoD approved course as per DoD 4500.9-R, Oct 99. (Note: Certain RCRA and safety related training elements required by 49 CFR 172 Subpart H and 40 CFR 265.16 are typically site-specific and must be performed on the job.)

Description. Training topics cover the identification and classification of hazardous wastes for purposes of preparing a hazardous waste manifest and fulfilling the

DOT requirements for shipping hazardous wastes. Specifically, training topics include RCRA waste classification, land disposal restrictions and notification, manifesting requirements, identification of a DOT Reportable Quantity, use of the Hazardous Materials Table, DOT requirements for determining a shipping name, properly packaging, labeling, marking and placarding, and DOT emergency response requirements. In addition, the course addresses special EPA and DOT requirements for shipping asbestos and PCBs.

Prerequisites. This course is primarily targeted at persons in the following series: 0820, 0809, 0810, 0819, 0028, 0029, 0025, 0026, 0401, 1350, 1301, 0893, 0830, and 1320. (All series involved with environmental programs, including all engineers, chemists, industrial hygienists, health physicists, biologists, geologists, hydrogeologists, program managers, planners, etc.)The training is designated for persons with any of the following job responsibilities: identification of proper shipping names for hazardous wastes in accordance with DOT regulations; selection of appropriate packagings, markings, labels and placards in accordance with DOT regulations; RCRA waste identification and classification; completion or review of hazardous waste manifests and/or land disposal restriction notifications; preparation of shipping documents for used oil, asbestos and PCBs; shipping of analytical samples; loading or unloading of hazardous wastes; and transportation of hazardous materials in general.

Session	Location	Date
2004-1	Huntsville, AL	02/24/2004 02/25/2004
2004-2	Virginia Beach, VA	06/30/2004 07/01/2004

HYDRO ANAL FOR ECOSYSTEMS

161 **33RAW01A**
Length: 36 Hours **Tuition: $1,980.00**

Purpose. The primary objectives of the course are to provide participants with an understanding of the role of hydrologic engineering in ecosystem restoration and mitigation studies. It also equips the participants with the tools for the various hydrologic engineering analyses necessary in planning and design of these features.

Description. Hydrologic and hydraulic processes generally control the creation, restoration, maintenance, size and function of rivers and aquatic and terrestrial floodplain ecosystems. They not only affect the quantity and quality of water available but also influence soil conditions, nutrient availability, salinity (in coastal wetlands), and the flora and fauna that develop along rivers and in wetlands. In riverine ecosystems the quantity of water available, its seasonal timing and duration, river alignment and exposure are some of the principal considerations influencing habitat and wildlife. This course will focus on hydrologic and hydraulic processes and in analyses that apply to ecosystem resotration. Methods for analysis of river flow, sediment transport, water quality, groundwater, and water budgets will be described. The course will present a variety of case studies to demonstrate the hydrologic processes involved in restoration and the application of different methods of analysis.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 800 and 400 series, 028, 819, 184, 101, 401, and 1301; (b) Grade GS-09 and above. Nominees should be water control managers, hydrologists engineers, environmentalists, biologist, economist, sociologists, ecologist, or study managers.

Session	Location	Date
2004-1	Davis, CA	04/19/2004 04/23/2004

HYDRO CONST MITI WET

440 **33HCM01A**
Length: 32 Hours **Tuition: $2,430.00**

Purpose. To provide state-of-the-science knowledge of wetland hydrology to enable existing Corps experts (engineering, planning, real estate, operations) to fulfill the demand for large-scale ecosystem restoration projects presently authorized or for the future.

Description. Wetland hydrology is the single most important factor in designing constructed wetlands. An introduction and overview of the prevalent water source models considering surface and ground water driven systems will be presented from both a case study and lessons-learned viewpoint. Past failures and successes will be examined. Important linkages between hydrology, wetland vegetation, soils, costs, engineering aspects, and real estate considerations are presented. Course focus will be directed toward large scale wetland ecosystem issues. Detailed water budget problems, calculations, solutions, and limiting factors are presented and evaluated in a highly facilitated problem-solving environment by the known experts in the field.

Prerequisites. Planning, engineering, regulatory, and natural resources personnel tasked with constructing mitigation wetlands. GS 09-14 personnel operating at full performance level within series.

Session	Location	Date
2004-1	Apalachicola, FL	03/15/2004 03/18/2004

HYDROGRAPHIC SURVEY TECHNIQUES

56 **35HST01A**
Length: 38 Hours **Tuition: $1,850.00**
CEUs: 3.3 **PDHs: 33**

Purpose. This course provides participants with the knowledge and technology required in performing hydrographic surveys in support of USACE navigation, dredging, surveying, coastal engineering, inland waterways and related marine construction activities. The course is designed to provide engineers, engineer technicians, field survey technicians, and A-E contract administration personnel with a technical familiarization of the criteria, standards, and specifications in EM

1110-2-1003, *Hydrographic Surveying*, and applying this manual in performing in-house and contracted hydrographic surveys.

Description. This course provides instruction on the process and procedures used to conduct hydrographic surveys. The instructional program emphasizes the processes required to most effectively perform hydrographic surveys using electronic surveying equipment available at most district offices and A-E contractors. The major subject areas covered include: hydrography, survey datums, depth and position determination, horizontal and vertical error estimation and analysis, tidal theory, computer hardware and software used for automated hydrographic surveys, fluff measurement, volume computations, multi-beam swath and multitransducer sweep systems, differential GPS positioning systems, LIDAR systems, and project planning. Some horizontal and vertical measurement concepts and techniques will be demonstrated in the field.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0800 (engineers, engineer technicians), 0817 and 1300 (field survey technicians), and 0095 and 1100 (A-E contract administration personnel); (b) Grade: GS-05 or above. Waivers will be considered.

Session	Location	Date	
2004-1	Sausalito, CA	07/19/2004	07/23/2004

HYDROLOGIC ENGR/PLAN

57 **35HEP01A**
Length: 36 Hours

Purpose. This course provides an understanding of basic hydrology and hydraulics concepts and their application in water resource planning.

Description. The course provides participants with a conceptual understanding of hydrograph analysis, fluvial hydraulics, frequency analysis, reservoir studies, and hydrologic studies for ecosystem restoration. The course is intended for professionals engaged in planning who have a limited background in the basic principles and theory of hydrology and hydraulics and their application in planning studies.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0000-0100, 0400, 0800, and 1300; (b) Grade: GS-05 or above. Participants should be professionals with a limited background in hydrologic engineering who are (or soon will be) engaged in water resource planning investigations.

ICRMP

962 **33CMO01A**

Purpose. Web-based. The ICRMP is the installation Commander's planning and control document for guiding and carrying out cultural resources conservation activities at a specific DOD installation. This course identifies and discusses requirements for developing an ICRMP that is both effective and compliant.

Description. Discussions cover legal, regulatory, survey, and content requirements, as mandated by various Federal laws and regulations, DOD Instructions and Directives, and service-specific military regulations. This course is for three audience groups: Qualified Cultural Resources Managers, if available and assigned to specfic installations; Contractors or consultants hired to prepare ICRMPs for target installations; and military planners assigned to assist in the ICRMP preparation process. The course is between two and three hours in length. It consists of six major modules: Introdution — Definitions, Objectives, and Responsibilities; Legal and Regulatory Compliance; Contractor Support Issues; Guidance for ICRMP Preparation; Content Requirements; and Reference Material. A Content Checklist is included for ICRMP developers.

IFS FOR INDUSTRIAL ENGRS

986/CECPW **54IFS01A**
Length: 36 Hours **Tuition: $800.00**

Purpose. This course is designed to give the student a review and analysis and cost management context for the performance of public works industrial engineering and program management functions.

Description. The student is given training on the Missions and Relationships of the Directorate of Public Works (DPW) Organization, the DPW Process Model of Facility Requirements, and the application of IT, IFS, HQEIS and other systems methods to collect, evaluate and present quantitative and qualitative data on public works processes and products.

Target Audience: Industrial Engineers or Engineer Resource Management Division (ERMD) Personnel experienced with process improvement processes and IFS SQL*PLUS querying.

Session	Location	Dates	
2004-01	Huntsville, AL	03/01/2004	03/05/2004
2004-02	Huntsville, AL	05/24/2004	05/28/2004

INRMP

963 **33NMP01A**

Purpose. Web-based. The INRMP is the installation Commander's planning and control document for guiding and carrying out natural resources conservation activities at a specific DOD installation. Preparation and approval of an INRMP is mandatory for all DOD installations, unless specifically exempted.

Description. This course identifies and discusses requirements for developing an INRMP that is both effective and compliant. Discussions cover legal, regulatory, survey, and content requirements, as mandated

by various Federal laws and regulations, DOD Instructions and Directives, and service-specific military regulations. This course is for three audience groups, as applicable: Qualified Natural Resources Managers, if available and assigned to specific installations; contractors or consultants hired to prepare INRMPs for target installations; and military planners assigned to assist in the INRMP preparation process. The course is between two and three hours in length. There are six major modules: Introduction — Definitions, Objectives, and Responsibilities; Legal and Regulatory Compliance; Contractor Support Issues; Guidance for INRMP Preparation; Content Requirements; and Reference Materials. A Content Checklist is included for INRMP developers.

INSTL SUPPORT

390 **46ISB01A**
Length: 38 Hours

Purpose. This course provides students with a working knowledge and awareness of the basic missions, functions, policies, procedures, and organizational structures of the installation Directorate of Public Works Base Civil Engineer and the U.S. Army Corps of Engineers (USACE) district-level organizations. Its purpose is to inform and train DPW/BCE and district personnel involved in requesting, providing, and managing installation support services.

Description. The course focuses on the accomplishment of reimbursable funded programs and fostering a partnering relationship between the installation and district staff. The course uses a mix of lectures, practical exercises, case studies, and group discussions to convey a large amount of information that is essential to establishing a successful installation support program from both the installation and district perspectives. The course emphasizes (a) typical mission, function, and organizational structure of a DPW and a district office; (b) the Army and USACE Installation Support Program and the global installation support organization/network; (c) authorities, policies, and procedures; (d) statutory and regulatory requirements and constraints; (e) planning, engineering studies, environmental, and other support services; (f) architect-engineer contract support, design execution and project management; (g) construction execution and contract management; and (h) partnering and customer service and sensitivity.

Prerequisites. Attendees should have been in their respective organizations a minimum of one year before attending this course. Target grade level of attendees is GS-07 and above. Each session will attempt to approximate a 50-50 mix of installation/base and district personnel. Typical functional areas appropriate for this course are the same for both installation/base and district personnel. Primary functional areas include engineering, construction, project management, environmental, housing, operation and maintenance. Secondary functional areas include resource management, contracting and real estate.

SPECIAL NOTE: This is a highly effective onsite training course. Onsite sessions allow the district and their supported installation to participate together in the learning and partnering process.

INSTRUCTIONAL METHODS

64 **48ITB01A**
Length: 36 Hours **Tuition: $910.00**

Purpose. This course provides potential instructors with knowledge of, as well as practice with, implementing methods and techniques necessary to design, develop, instruct, and evaluate lesson materials in a course of instruction.

Description. Topics covered through lectures, demonstrations, and practical exercises include Corps of Engineers Systems Approach to Training, roles of the instructor, writing instructional objectives, oral and written communications skills, lesson planning, instructional aids and technology, the adult learner, methods of instruction, classroom management, counseling, tests, and questioning techniques. Creative training techniques, to include experiential learning, methods of modeling the learning environment, creating a stimulating, motivating classroom learning environment will also be discussed. The student demonstrates mastery of these topics through the development and presentation of a lecture, lecture with questions, and student involvement activity.

Prerequisites. Nominees should be assigned (a) Occupational Series: All; (b) Grade: All. This course is designed for potential instructors in the PROSPECT program. However, the methodology presented is beneficial to any individual charged with developing and conducting any type training, presentation, or briefing.

Notes. This course contains requirements which are mandatory for course completion and may require an estimated 6 hours of overtime. It is your responsibility to bring this to the attention of your supervisor so that an overtime request/determination can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

Session	Location	Date
2004-1	Huntsville, AL	11/03/2003 11/07/2003
2004-2	Huntsville, AL	03/01/2004 03/05/2004

INTERIOR FLOOD HYDRO

173 **35IFH01A**
Length: 36 Hours

Purpose. This course provides the participant an opportunity to gain a working knowledge of available techniques for hydrologic analysis of flood hazard for interior areas.

Description. Interior area flood problems arise when natural drainage paths are blocked such as by levees, floodwalls, and coastal barriers. This course characterizes the interior flooding problem and provides techniques for evaluating such measures as detention basins, gravity drains, and pumping stations. Simulation techniques, coincident frequency analysis, and other approaches are treated in lectures, problem-solving sessions, and case studies. Engineering and other considerations in selecting and sizing interior flood control facilities are emphasized. Action required to preserve the functional capabilities of interior flood facilities are discussed. The newly-developed Interior Flooding Hydrology computer program will be used for lectures, demonstrations, and workshops.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0800 and 1300; (b) Grade: GS-07 or above. The participant should have a working knowl-edge of surface water hydrology and open channel hydraulics. In addition, it is required that course participants be in positions, or anticipate being in positions, where they will be involved in interior flood control studies within the next year or two.

INTERPRETIVE SERVICE

72 **53INT01A**
Length: 24 Hours **Tuition: $1,260.00**

Purpose. This course is intended for employees in natural resource management career fields and others who have interpretation or related job responsibilities. The course is designed to develop the skills of Interpretive Services and Outreach Program managers in the Corps, to show how to develop, evaluate, and contract interpretive media, and to demonstrate the use of regulations that can enhance the Interpretive Services and Outreach Program.

Description. After completing the course, the student should be able to develop and maintain an effective interpretive services program. Topics covered include (a) definitions of interpretation and outreach; (b) objectives of Corps interpretive efforts; (c) role of the manager in interpretation; (d) target groups and media selection; (e) use of volunteers; (f) use of cooperating associations; (g) visitor center exhibit and wayside contracts; and (h) interpretive planning and evaluation.

Prerequisites. Nominees must be assigned (a) Occupational Series: 023, 025, 026, 028, and 1001 as well as all of the 400 series (b) Grade: GS -05 or above (c) employees in job series other than those listed above who have interpretation as part of their job responsibilities. It is recommended, but not required, that nominees have completed Certified Interpretive Guide training by the National Association for Interpretation or equivalent training.

Session	Location	Date	
2004-1	Huntsville, AL	02/03/2004	02/05/2004

INTRO TO GEN CONST—QV

738 **35GCQ01A**
Length: 32 Hours
Video Run Time: 3.2 Hours
LUs: 28 **Tuition: $1,500.00**

Purpose. This course provides the participant with an introductory technical knowledge required for the quality verification of all elements of building construction, based on guide specifications, and identifies quality assurance personnel's role as it relates to construction quality management. This course should be a prerequisite for the classroom Quality Verfication: General Construction course.

Description. The topics covered in this course are divided Into ten modules, as follows: (a) Quality Management; (b) Site Utilities/Plumbing; (c) Concrete/Masonry; (d) Structural Steel/Welding; (e) Carpentry/Insulation/Hardware/Tile; (f) Roofing/Sheet Metal; (g) Interior Finishes; (h) Air-Conditioning/Mechanical Insulation; (i) Heating/Air Distribution; and (j) Electrical.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0801, 0802, 0809, 0810,0830, and 0850; (b) Grade: GS-05 or above; (c) Other: Current or projected assignment as quality assurance personnel, construction general or technical personnel, or engineers with verification responsibilities. The fact that this course is oriented to building construction should be weighed when nominating a civil works candidate. Students should have completed the Construction Quality Management (classroom or exportable) course.

INTRO TO NCR

964 **33INC01A**

Purpose. Video-based. Overview on natural and cultural resources and how effective land management supports the accomplishments of the military mission.

Description. The course offers awareness-level training that includes: legal compliance requirements; assistance from non-profit organizations and other government agencies. Instruction is primarily focused on events that impact the conservation of air, land, water, and cultural resources. A desk reference is provided to each student as a job performance aid. The video-based instruction includes an instructional video, Facilitator Guide, and Student Study Guide. The target audience includes selected military, civilian, and contractor personnel within DOD and U.S. Coast Guard who, as a part of their job, need introductory instruction in the roles of natural resources and cultural resources in DOD.

INTRO TO WETLANDS-WBT

820 **Tuition: TBD**

Purpose. Under Development

Description. Under Development

Prerequisites. Under Development

INVASIVE SPECIES

965 **33ISP01A**

Purpose. Web-based. Assists DOD natural resources personnel in managing installations for the prevention and management of invasive species. Designed for both military and civilian natural resources policy makers at all grade levels. Accessible over the Internet, and is self-paced and modular in format. There are three modules with each related to, but independent of the others: Introduction fo Invasive Alien Species as a Natural Resources Mangement Responsibility on Military Installations; The Prevention of Invasive Alien Species on Military Lands; and The Management of Invasive Alien Species on Military Lands.

Description. An individual can access the modules in any order deemed most relevant to their needs. Each module will be the equivalent of one hour of self-paced instruction in front of a terminal. Each one hour modules of instruction will be subdivided into three submodules representing approximately 15 minutes each of self-paced instruction. The submodules also include a 5-minute multiple choice test at the end of each session. Consequently, a submodule unit of instruction can represent approximately 20 minutes spent before a terminal. Completion of 3 submodule units of instruction equals the completion of a module and will be equivalent of approximately 1-hour of instruction. These calculations of time spent before a terminal do not include possible time spent on links to other web sites or communications with others accessing the course on other installations. Completion of all modules signals completion of the course. Web features include links to other web sites, communications between individuals taking the course at different installations, registration information that includes identification of the service represented by the individual taking the course, graphics, video, photos, and other multimedia enhancements. A pre-test and post-test is administered for each module.

INVENTORY MGMT-WBT

798
Length: Self-Paced **Tuition: N/C**

Purpose. This purpose of this course is to familiarize personnel of the Corps' policies concerning inventory and financial management and standard inventory practices.

Description. Modules of instruction include inventory accounting policy; inventory data conversion instructions; CEFMS inventory management and implementation of the inventory management plan.

Prerequisites. This course is open to all logistics management personnel.

LANDSCAPE—QV

755 **31LQV01A**
Length: 16 Hours
Video Run Time: 1 Hour
LUs: 16 **Tuition: $500.00**

Purpose. This course covers verifying, site preparing, excavating, installing, finishing, and accepting turfing and planting of trees, shrubs, ground covers, and vines for construction contracts. Included are uniform methods and procedures to verify and accept turfing and planting contracts. It may be used during preconstruction or coordination meetings to address what is expected of the landscape contractor in terms of turf and plant quality.

Description. Topics covered in this course are divided into five modules, as follows: (a) The Preparatory Phase; (b) The Initial Phase; (c) Installation of Plant Material and Turf; (d) The Follow-Up Phase; and (e) The Acceptance Inspection.

Prerequisites. Nominees should be assigned (a) GS-05 and above; (b) Occupational Series 0800; (c) as quality assurance personnel who assume landscape contract quality and those in job series who develop landscape specifications. Students should have completed the Construction Quality Management (classroom or exportable) course.

LEADERSHIP FOR LEARNING

34 **21HR401A**
Length: 32 Hours **Tuition: $1,460.00**

Purpose. To develop a shared understanding of the Learning Organization Doctrine, what a learning organization is and how leaders create learning, a common language of leadership for current leaders and those who might be leaders, the selection and development of leaders as a "Be, Know, Do, Learn" process, how leaders understand the Context they operate in, the Logic necessary for success, and the Process for leading organizational change.

Description. The Corps' intent is to develop leadership at all levels to address current challenges. "Leaders at All Levels" requires a shared understanding of effective leadership today which is not vested in position, but is created through interactive, collaborative relationships. This understanding includes why today's knowledge and service work requires a particular kind of leadership at all levels of the Corps.

This course about effective leadership today helps learners understand their assumptions about leadership as well as the importance of enhancing strengths rather than repairing weaknesses. They will also learn about their own strengths and character as potential leaders.

The course explains the importance of selecting and developing this effective leadership that is required by the challenges, strategic direction, values and vision of the Corps.

Based on the Be-Know-Do-Learn Cycle of continuous improvement, learners will understand the elements of improved leadershi: character (including talent themes), knowledge and skills, and the continuous learning leaders need to be effective leading learning organizations. Many leader-development programs today do not distinguish between knowledge, skill or character development, and miss systematic organizational learning entirely.

This course will focus on understanding the interrelationships between context, logic, character, knowledge, skills, organizational learning, effectiveness, and innovation.

Prerequisites. Nominees may be employees in Grades GS/GM 11-15 serving in, or anticipating serving in, a leadership role. Once selected, participants will complete the Strengths inventory via Gallup StrenghtsFinder.

Session	Location	Date	
2004-1	Huntsville, AL	07/13/2004	07/16/2004
2004-2	Virginia Beach, VA	05/18/2004	05/21/2004
2004-3	San Diego, CA	08/16/2004	08/19/2004
2004-5	Honolulu, HI	06/22/2004	06/25/2004

LUBRICATION OF MECH EQUIP *NEW*

412
Length: 30 Hours **Tuition: $1,130.00**

Purpose. This course is designed primarily for Corps personnel who have hydropower, navlock, and spillway maintenance responsibilities; such as supervisors, mechanic crew foremen, engineers, powerhouse mechanics, and technicians. It provides a comprehensive understanding of lubrication issues in hydropower facilities, navigation locks, and spillways. It may also be of benefit to design engineers who need a broader knowledge of lubricant characteristics and performance.

Description. Through lectures, visual aids, and case study sessions, this course covers the following subjects: (a) friction, wear and lubrication fundamentals; (b) lubricant formulation; (c) turbine oil additives and their function; (d) essential characteristics of turbine oils; (e) turbine oil sampling, testing, and interpretation of test data; (f) an introduction to proactive maintenance practices based on tracking and trending of test data; (g) compatibility of turbine oils; (h) oil purification; (i) oil filtration and contamination control; (i) lubricating greases - classification, formulation and application; (j) compatibility of greases; (k) hydraulic fluids; (l) compressor oils; (m) gear oils; and (n) environmentally acceptable lubricants. The course includes a tour of a Corps powerhouse.

Prerequisites. Nominees must be assigned in GS or WG Occupational Series as engineers, supervisors, mechanic crew foremen, mechanics, and technicians at Corps' facilities with responsibility for operations and maintenance. Exceptions may be considered for COE design engineers, and personnel involved with management and planning in hydropower related organizations, but not directly involved in hydropower O&M.

Session	Location	Date	
2004-1	Portland, OR	05/10/2004	05/14/2004

MII ADVANCED

312 **54MGA01A**
Length: 36 Hours **Tuition: $1,130.00**
CEUs: 2.8 **PDHs: 28** **LUs: 28**

Purpose. This course provides cost engineering professionals with advanced instructions on accessing and utilizing the components of the MII 32-bit software program not provided in the MII 32 bit basics course. This course presents detailed information on: (a) Military Programs, Civil Works, Environmental and Parametric Estimating; (b) ENG Form 3086 Preparation; (c) Crew Productivity Analysis for Civil Works; (d) Military Program, Civil Works and Environmental Work Breakdown Structures; (e) Management of MII Databases and tables and (f) Other Advanced Cost Engineering Tools.

Description. The course provides instruction on the use of parametric worksheets and quantity linking (parametric modeling) for the development budget, as well as detail cost estimates. This modeling approach and other estimating techniques are used to develop ENG Form 3086 estimates in the proper electronic format. Parameter worksheets, quantity linking, and assemblies are also applied to crew productivity analysis for the development of Civil Works (CW) estimates. The course explores estimate structures development and reporting to accommodate the CW Code of Accounts and the Military Programs and Environmental Work Breakdown Structures (WBS). Students will work with database functions to create site-specific unit prices, modify equipment costs for project specific circumstance, and adjust crew for overtime and shift differential.

Prerequisites. Nominees should be (a) Occupational Series: Selected 0800 series; (b) Grade: GS-9, minimum; (c) knowledgeable of the MCACES for Windows 32-bit software applications and the cost engineering rules and regulations; (d) knowledgeable of Microsoft Windows (TM) software application (WinNT or later). This course is open only to DoD personnel; other nominees must obtain CECW-EI approval and may be permitted to attend on a last priority basis.

Session	Location	Date
2004-1	Huntsville, AL	06/07/2004 06/11/2004

MII BASIC

305 **54MCA01A**
Length: 36 Hours **Tuition: $930.00**
LUs: 36

Purpose. This course provides cost engineering professionals with instruction in the preparation and execution of computerized cost estimates using the latest MII cost estimating software program. This course also supplements computerized estimating with ready-reference material intended to improve the participant's knowledge of Corps of Engineers policies and procedures for preparing government estimates for Military, Civil Works and Environmental construction projects.

Description. Through lectures, demonstrations, and hand-on microcomputer usage, this course covers the basic computerized aspects of estimating using the latest 32-bit version of MCACES (MII), the new electronic Unit Price Book (UPB) and other supporting databases and tables (i.e., crew, equipment, assemblies, labor, etc.) The student is required to complete quantity takeoffs and prepare detailed cost estimates, which may require work to be done after regular class hours. A pretest and posttest will be given.

Prerequisites. (1) Nominees must be assigned (a) Occupational Series: Selected 0800, 0802, 0810, 0830, and 0850; (b) Grade: GS-07 and above; (2) This course is open only to DoD personnel. Other participants must obtain CECW-EI approval and may be permitted to attend only on a last priority basis; and (3) Participants should have at least a basic knowledge of microcomputers and the Microsoft Windows NT or later operating environments. Previous exposure to MCACES Gold and MCACES for Windows 16-bit software programs are helpful.

Notes. This course contains requirements which are mandatory for course completion and may require an estimated 2 hours of overtime. It is your responsibility to bring this to the attention of your supervisor so that an overtime request can be made by your appropriate personnel. It's also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

Session	Location	Date
2004-1	Huntsville, AL	03/08/2004 03/12/2004
2004-2	Huntsville, AL	04/19/2004 04/23/2004

MARINE MAMMALS

966 **33MMA01A**

Purpose. Web-based with CD-ROM. The course will be presented in three independent modules. Module One is an introduction to the laws and regulations governing marine mammals, including the Marine Mammal Protection Act (MMPA) and the Endangered Species Act. The concept of "take" is discussed, as are exceptions, authorizations, and permits under the MMPA. Modules Two and Three provide detailed instruction on identification of marine mammals of special significance, and the marine mammals commonly encountered in DOD and USAG areas of operation. Module Two focuses on whales, dolphins and porpoises; and Module Three focuses on Pinnipeds and other Marine Mammals. Module Four provides instruction in completion of sighting forms, and entanglement and boat collision reports.

Description. Course delivery is through computer-based training, and will be delivered to the student on a CD-ROM. Students must have a 486 DX66 or SX computer (Pentium preferred) with 8 MB RAM minimum (12 MB recommended) running Windows 3.1 (or later) or Windows NT 3.51 or later. A standard 4.0 browser, CD-ROM player and video card are also required. Preferred configuration includes a sound card and speakers, and access to the Internet.

Prerequisites. Audience Description: Module One: All personnel with any interactions with marine mammals: Natural resources managers, wildlife biologists, shipboard personnel, aids to navigation teams, legal staff, and outdoor recreation, public affairs, and real estate/property personnel. Modules Two and Three: Personnel with responsibilities for identifying marine mammals: Natural resources managers, wildlife biologists, shipboard personnel, and aids to navigation teams. Module Four: Personnel responsible for completing and processing sighting forms, entanglement reports, and boat collision reports.

MASONRY CONST—QV

752 **35MCO01A**
Length: 12 Hours
Video Run Time: 1.25 Hour
LUs: 12 **Tuition: $650.00**

Purpose. This course discusses the basic requirements for masonry construction for seismic and nonseismic areas for reinforced and nonreinforced bearing and nonbearing walls. Its focus is on areas that quality assurance personnel should consider to identify and correct potential problems during construction.

Description. The training materials include a 1/2" videotape cassette, a Facilitator's Guide, and a Student Study Guide. Topics covered include (a) Applicable Codes, CEGS 04200, 04230, TM 5-809-3; (b) Materials and Approvals: (1) Blocks: hollow non-load bearing, hollow load bearing, solid load bearing, (2) Bricks, (3) Mortar and grout, (4) Vertical and horizontal reinforcement, and (5) Flashings; (c) Sample Panels; (d) Masonry Wall Types: (1) Conventional, (2) Composite wall, and (3) Cavity wall; (e) Concrete Masonry Unit (CMU) Lintels; (f) Bond Beams; (g) Control Joints; (h) Hot and Cold Weather Protection; and (i) QA and QC Requirements.

Prerequisites. Students should be assigned to quality assurance duties and have a basic knowledge of quality control quality assurance responsibilities. Students should have completed the Construction Quality Management (classroom or exportable) course.

MASONRY STRUC DESIGN

317 **35MSD01A**
Length: 36 Hours **Tuition: $1,270.00**
LUs: 34

Purpose. This course familiarizes the engineer in design and construction practices including criteria, procedures, and specifications for masonry structures. The course instructs Corps engineering personnel in the techniques of masonry design and construction utilizing TI 809-06 "Masonry/ Design for Buildings" and seismic issues will be addressed and the bases for all seismic design will be TI-809-05, "Seismic Design for Buildings" and TI 809-05, "Seismic Evaluation and Rehabilitation for Buildings." other pertinent literature. Approximately 80% of Army buildings include masonry as a building unit. Proper design will eliminate future problems and be cost effective.

Description. Topics include (a) masonry materials, properties, and testing; (b) design loads; (c) reinforced masonry design and construction; (d) lateral load considerations and shear wall design; (e) column/plaster design; (f) masonry lintels; (g) bond beams; (h) masonry specifications; (i) masonry details; (j) workshop design problems; (k) evaluation and retrofit; and (l) quality assurance. After taking this course the structural engineer should be able to design a cost effective building that has incorperated the latest technologies to produce a building with the desired structural integrity. The manuals to be used are TI 809-06, "Masonry Design for Buildings" along with other Corps manual and referenced national guidance and standards.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0800; Grade: GS-07 or above. Nominees should be engineers with masonry design or construction responsibilities. Course is open to Air Force and Navy personnel.

Session	Location	Date
2004-1	Huntsville, AL	07/19/2004 07/23/2004

MASTER PLANNING

75 **46PMP01A**
Length: 36 Hours **Tuition: $1000.00**
CEUs: 2.5 **PDHs: 25** **LUs: 25**

Purpose. This course is an introduction to REAL PROPERTY MASTER PLANNING for planners and Real Property Specialists at Army installations and Corps of Engineers district levels. The goal of the course is to make planners more effective by providing them with the information, understanding, and tools they need to operate within the Army Real Property Master Planning system. For non-planners, this course provides an overview of how an installation's planning is performed and how their organizations fit into the process. General planning principles covered in this course may be applicable to the U.S. Army Reserves and other military services and Government agencies.

Description. Through lectures, case studies, group interaction, and practical exercises, this course will (a) explain the clarify AR 210-20, Master Planning for Army Installations; (b) present the planning process/methodology in general and explain how it is applied to the Real Property Master Planning system; (c) show the role and relationship of real property planning to the Army's Planning, Programming, Budgeting, and Execution System (PPBES); (d) explain the structure of the Army and its installations and how and where the facility planner fits into it; (e) emphasize that planning for any complex system requires teamwork and coordination; (f) explain how to establish and manage the Real Property Planning Board; (g) emphasize real-time understanding on how to complete charettes; and (h) present an overview of sustainable development concepts.

Prerequisites. Nominees must be assigned to GS-05 or above and associated with military installation real property planning and management support functions at Army installation/communities, MACOMs, MSCs, USAR, RSCs, USACE divisions/districts, and/or a supporting contractor.

Session	Location	Date
2004-1	Washington, DC	04/26/2004 04/30/2004
2004-2	Huntsville, AL	08/02/2004 08/06/2004

MASTER PLANNING SKILLS

326 **49MPS01A**
Length: 36 Hours **Tuition: $1200.00**

Purpose. This course provides basic skills required by Army installation master planners to perform day-to-day planning functions. It provides knowledge of processes, procedures, and the automated planning tools that support these functions to include RPLANS, ASIP, and other systems.

Description. Through lecture and hands-on computer exercises, this course covers the process of developing allowances and requirements, the description and use of the Real Property Planning and Analysis System (RPLANS), the use of spatial data systems in support of the master planning process, and the implications and use of other data sources (real property, installation status). Other automated planning tools discussed include HQEIS, ISR, FPS, ACTS, and ASIP.

Prerequisites. Attendees should be engaged in the real property planning and management of Army Real Property facilities. Participants require the fundamental knowledge of master planning or real property and

supporting automated systems to plan properly for and manage Army facilities.

Session	Location	Date
2004-1	Huntsville, AL	02/09/2004 02/13/2004
2004-2	Huntsville, AL	08/30/2004 09/03/2004

MECHANICAL—QV

74 **35MCQ01A**
Length: 35 Hours **Tuition: $990.00**
CEUs: 3.2 **PDHs: 32**

Purpose. This course provides the participant with information, procedures, and problem area solutions that must be known to effectively perform mechanical quality assurance duties. The course specifically addresses preparatory, initial, and follow-up inspection techniques concerning the equipment, material, and testing requirements for mechanical systems common to most building construction.

Description. Through lecture, visual aids, conferences, and case study sessions, this course covers such subjects as (a) plumbing, (b) heating, (c) refrigeration, (d) air-conditioning, (e) fire protection, (f) HVAC controls, (g) outside utilities, (h) insulation, and (i) underground storage tanks. It emphasizes the government QA representative's role in construction quality management.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0801, 0802, 0809, 0810, 0830, and 0850; (b) Grade: GS-05 through GS-12. Nominees should have a current or projected assignment as an engineer, engineering technician, or construction representative, GS-12 and below, with mechanical quality assurance representative responsibilities. Nominees must not have attended this course or a similar course within the past 5 years.

Session	Location	Date
2004-1	Phoenix, AZ	10/20/2003 10/24/2003
2004-2	Annapolis, MD	06/21/2004 06/25/2004

MGT OF HYDROPWR-O&M

376 **35MHO01A**
Length: 36 Hours **Tuition: $1,550.00**

Purpose. This course is designed primarily for civil works managers, supervisors, engineers, and technicians who have hydropower operations and maintenance responsibilities. It provides a comprehensive understanding of the management of the hydropower facilities. It may also be of benefit to planners, design engineers, hydrologists, and Reservoir Control Center staff who need an understanding of hydropower O&M from the field level perspective.

Description. Through the use of lectures and tours, this course covers the management of Corps of Engineers hydroelectric generating stations. It includes the integration of generating stations into larger energy delivery systems. It considers environmental requirements, power system accounting, maintenance management, power system operation, safety consideration, material flow, benchmarking, and control systems. The course includes a tour of a Corps powerhouse, a power marketing agency training group, and a major power transmission facility. Prospective students should be managers or prospective managers of Corps of Engineers hydroelectric assests.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0025, 0100, 0400, 0800, and 1600; (b) Grade: GS-09 or above; (c) as engineers and technicians at hydropower plants for operations and maintenance; (d) as managers and supervisors with responsibility for hydropower plants for operations and maintenance; (e) to district or division office level positions in hydropower operations and maintenance; to positions requiring an extensive knowledge of hydropower operations and maintenance practices, especially those anticipating assignment to a position in hydropower operations and maintenance; and (f) as planners, designers, and water control engineers who need an understanding of the practical side of hydropower O&M in order to perform their mission.

Session	Location	Date
2004-1	Portland, OR	08/09/2004 08/13/2004

NAT RES COMPLIANCE

967 **33NRC01A**

Purpose. Video-based. Instruction in specific natural resources laws, regulations, policies, Executive Orders, DOD Instructions, and other guidance, noting Service-specific requirements.

Description. Instruction includes National Environmental Policy Act; Fishing, Game, and Wildlife Management Laws; Wetlands, Waterways, and Other Ecological Areas; Forest Land Use Management Laws; and Interservice Cooperation. Practical exercises and guest speaker (s). Natural and cultural resources managers and personnel, environmental lawyers (or lawyers in that capacity), civil works natural resources managers (U.S. Army Corps of Engineers), natural resources law enforcement personnel, and environmental staffs.

NATIONAL ELECTRICAL CODE

78 **35NEC01A**
Length: 36 Hours **Tuition: $940.00**
CEUs: 3.0 **PDHs: 30**

Purpose. This course increases the proficiency of the electrical engineer and the electrical technician in designing interior systems which meet the requirements of the NEC or, when given an actual or intended installation, increases their proficiency in identifying the appropriate code rules and the determination of acceptability.

Description. This course covers the application and interpretation of code requirements for the design and construction of interior electrical systems through directed informal discussion sessions and case studies. Topics include, but are not limited to, interior distribution, motor circuits, calculations, ground fault circuit interrupters, and hazardous areas.

Prerequisites. Nominees should be assigned (a) Occupational Series: 0801, 0802, 0809, 0810, 0830, 0850, or 0855; (b) Grade: GS-09 or equivalent wage grade and above. Nominees should be electrical engineers of any grade level or engineering technicians or construction representatives GS-09 or above. Nominees should be familiar with the principles of interior electrical installations or currently be assigned responsibilities for design, construction, or maintenance of interior electrical installations at Corps or other government facilities.

Notes. The student may be required to expend more than eight hours of class time on required "homework" assignments for this course resulting in the need for an estimated 4 hours of overtime for the entire week. It is the student's responsibility to bring this to the attention of his/her supervisor so that an overtime determination/request can be made by the appropriate personnel and for certifying the amount of time expended on these requirements if the overtime compensation is used.

Session	Location	Date
2004-1	Nashville, TN	10/20/2003 10/24/2003
2004-2	Minneapolis, MN	05/03/2004 05/07/2004

NEG CONST CONT MODS

368 **41NCC01A**
Length: 36 Hours **Tuition: $890.00**
CEUs: 2.5 **PDHs: 25** **LUs: 25**

Purpose. This course provides instruction that will improve the participant's effectiveness in negotiating construction contract modifications. The course provides a thorough review of the processes in effectively analyzing contractor proposals and government estimates. This course assists the participant in applying sound judgment to arrive at an equitable adjustment. The course is recommended for individuals who are involved in processing and negotiating construction contract modifications.

Description. The course provides lectures, discussions, case studies, and workshop sessions, which present a detailed explanation of regulations affecting negotiations, pricing objectives, the independent government estimate, cost or pricing data (truth-in-negotiations), job and home office overhead, contingencies, profit, special modification problems, and negotiation strategy and techniques. This course also covers the manner in which costs are expressed, analyzed, and used in negotiating construction modifications, task orders, and contracts.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0340, 0800, 1102, and 0905; (b) Grades: Military: 0-3 and above; Civilian: GS-07 and above; (c) Experience: recommended for personnel with 1-3 years of experience in the construction and contract administration functions; (d) Responsibilities: attendees should have or anticipate having responsibility for processing, negotiating, or reviewing construction contract modifications; (e) Knowledges/skills: attendees should possess a general knowledge of the post-award construction contracting process. Previous completion of the Construction Contract Administration course (No. 366) is suggested.

Session	Location	Date
2004-1	San Antonio, TX	10/27/2003 10/31/2003
2004-2	Huntsville, AL	03/01/2004 03/05/2004
2004-3	Albuquerque, NM	05/10/2004 05/14/2004

NUMERICAL TOOLS *NEW*

294 **35NTG01A**
Length: 76 Hours **Tuition: $3,830.00**

Purpose. The course is to provide geotechnical engineers with the essential computers programs often used in daily analyses to various problems. The trainees will obtain the theories, analysis skills and case histories for each computer program.

Description. The course covers the following topics/computer programs

- Seepage analyses and other tools in the Ground Water Modeling System.
- Earthquake ground motion assessment.
- Earthquake site response using SHAKE.
- Evaluation of earthquake induced liquefaction using spreadsheets based on the Seed and Idriss simplified method using a spread-sheet program.
- Analyses of earthquake-induced ground displacements using the Newmark method.
- Practical applications of probability and reliability concepts applied to general engineering analysis including the above topics (seepage, ground motion, site response, deformation, etc.) .

Prerequisites. Civil engineers, GS-9 and above. Nominees should have a pre-knowledge of soil dynamics.

Session	Location	Date
2004-1	Vicksburg, MS	TBD

O&M CONTRACTS

119 **41OMC01A**
Length: 28 Hours **Tuition: $770.00**
CEUs: 2.6 **PDHs: 26**

Purpose. This course provides basic instruction to operations/natural resource managers, park rangers, maintenance supervisors, and operational support personnel on preparing and administering a broad range of

service, supply, and small construction contracts and purchase orders used at civil works projects. Individuals needing instruction mainly in formal Construction Contracts should take the Construction Contract Administration course (#366).

Description. Contracting procedures being used on civil works projects for operation and maintenance are addressed through lecture, discussion, and exercises. Special emphasis is given to those steps which are key to developing and administering successful contracting programs. As a basic first exposure to O&M contracting, the student will develop a sound understanding of techniques and responsibilities. Specific subjects addressed in the course are: contracting procedures, safety considerations, contract clauses/payments, COR duties and responsibilities, technical contract requirements, formulation of a solicitation, and quality assurance.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0023, 0025, 0300, 0400, 0800, 1100 and 4749; (b) Grade: GS-05, WG-05, and above. Students should have current or projected assignments involving project contracting procedures.

Session	Location	Date
2004-1	Las Vegas, NV	11/04/2003 11/07/2003
2004-2	Huntsville, AL	03/23/2004 03/26/2004

O&M CONTRACTS ADV

318 **41OMA01A**
Length: 32 Hours **Tuition: $1,140.00**
CEUs: 1.8 **PDHs: 18**

Purpose. This course provides operations/project personnel with additional skills for developing and administering service, maintenance, and construction contracts.

Description. Through lectures, field exercises, and directed discussion sessions, this course covers contract types, administrative considerations, legal implications, and handling adverse circumstances of O&M contracts. This course provides project contract administration personnel with advanced understanding in project operations where significant reliance on O&M contracting is required.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0023, 0025, 0300, 0400, 0800 and 1100; (b) Grade: GS-07 or above or equivalent WG grade and series. Students should be assigned project office contracting responsibilities, or district office personnel involved in contract administration supervision. Students must have completed the Administration of Operation and Maintenance Contracts basic course (No. 119).

Notes. SPECIAL INSTRUCTIONS. This course includes a one-day field trip. Students should be prepared for inclement weather and bring appropriate shoes and clothing.

Session	Location	Date
2004-1	Boston, MA	10/28/2003 10/31/2003
2004-2	Birmingham, AL	02/24/2004 02/27/2004
2004-3	Nashville, TN	05/04/2004 05/07/2004

OMBIL APPLIC FOR MGRS *NEW*

160
Length: 28 Hours **Tuition: $1,030.00**

Purpose. The Operations and Management Business Information Link (OMBIL) is a web-based, business information gateway (on the Corps Intranet at https://ombil.usace.army.mil) which links five major Corps business functional systems (navigation, hydropower, recreation, environmental stewardship including natural resources and environmental compliance, and flood damage reduction) with CEFMS for the purpose of data collecting, data management, reporting, and performance measurement. Operations, Program and Project Managers in these major business functional areas need to learn what is available and how to quickly access this web-based interface for tracking, monitoring, and viewing information and for use in making management decisions. Students will perform hands-on-searching and report-building activities in a computer laboratory

Description.
- Course will discuss OMBIL purpose and background.
- Overview of information and reports available in five major business areas. Type of data available, what reports can be created, and how the process works. How to acquire real-time operation data and extract data and create reports. Business area relationships will be explored.
- Develop performance analysis & project performance, output trends and comparisons.
- Students will perform practical exercises in which they use the web interface to extract and generate general information and reports for their business area.

Prerequisites. (a) Nominees should be from all USACE levels (HQ, divisions, districts) who are operations, program, or project managers involved with navigation, hydropower, recreation, environmental stewardship, and flood damage reduction. Nominees may also be park managers, park rangers, and lock or plant operators responsible for managing operations data. (b) Grades: GS-9 through GS 15 or equivalent.

Session	Location	Date
2004-1	Huntsville, AL	12/02/2003 12/05/2003
2004-2	Huntsville, AL	03/30/2004 04/02/2004

OP BUD APP NONFIN

746 **42OBA01A**
Length: 8 Hours
Video Run Time: 47 Minutes **Tuition: $500.00**

Purpose. This course teaches responsibility center managers how to use operating budgets to facilitate resource decisions, analyze trends, impacts, and operating performance. The course describes cost management theory, defines budget terms and processes, and identifies benefits and applications of operating budgets.

Description. Training materials include a 1/2" videotape cassette, a Facilitator's Guide, and a Student Study Guide. Training is designed to be accomplished in 8 hours.

Modules. The ten modules of instruction presented in the course are (a) Understanding Budget Terminology and Process; (b) Determining Mission and Goals; (c) Considering the Total Workload; (d) Forecasting Future Needs/Impacts; (e) Developing an Operating Budget; (f) Making Corporate Decisions Using the PBAC Process; (g) Determinin g Rates/Rescheduling; (h) Reviewing Cost Versus Budget; (i) Ensuring Effective Resource Management; and (j) Analyzing Final Budget Execution.

Prerequisites. Nominees must be responsibility center managers who direct and control resources to accomplish the mission or operation. All occupational series are eligible.

OPERATIONS MANAGEMENT

245 **46OMW01A**
Length: 36 Hours **Tuition: $1,220.00**

Purpose. This course will give emerging leaders the operations managers perspective of managing a project. It also provides an overview of Corps of Engineers operations business processes and systems. It is intended to foster a uniform understanding of the initiatives and improvements introduced in the operations arena over the past several years. It is mission essential training for Operations Managers.

Description. This course covers a broad range of topics that personnel in Operations Management must be familiar with. It focuses on: (a) the operations business process; (b) programs and policies in effect for projects and facilities; (c) applicable laws and regulations governing operations; and (d) necessity and values of interaction with stakeholder groups.

Prerequisites. Nominees must be: (a) Grade GS-09 or above; (b) directly involved in the management of operating projects for USACE. First consideration will be given to Operations Project Managers and senior MSC, district or project people who aspire to, or have been identified by management to become, Operations Project Managers.

Session	Location	Date	
2004-1	Washington, DC	02/09/2004	02/13/2004
2004-2	Washington, DC	08/09/2004	08/13/2004

ORD AND EXP RESPONSE

399 **58EXS01A**
Length: 32 Hours **Tuition: $1,170.00**

Purpose. This workshop is for project managers and technical disciplines, safety and occupational health professionals, legal, public affairs, real estate, and management personnel having responsibilities for Ordnance and Explosives response under the Defense Environmental Restoration Program to include Formerly Used Defense Sites, Installation Restoration; and Base Realignment and Closure Program. This workshop provides an overview of information concerning the DoD role in Ordnance and Explosive response actions under the Defense Environmental Restoration Program to include Formerly Used Defense Sites, and Installation Restoration and the Base Realignment and Closure program to include in-depth information on ordnance safety and recognition.

Description. This workshop consists of classroom instruction focusing on Ordnance and Explosive response activities under the Defense Environmental Restoration Program covering Formerly Used Defense Sites, Installation Restoration/Base Realignment and Closure as well as work for others. The workshop addresses Center of Expertise functional responsibilities, environmental laws and regulations, legal issues, programmatic policies and procedural requirements, project management and project execution, ordnance safety and recognition, safety sources of information, ordnance and explosives support for HTRW & Construction activities, detection and disposal, contracting, indemnification, Defense State Memorandum of Agreements, Community Relations, formulation of Restoration Advisory Boards, and Administrative Record requirements.

Prerequisites. Attendees should be project managers and technical disciplines, safety and occupational health professionals, legal, public affairs, real estate, and management personnel working on OE response actions.

Session	Location	Date	
2004-1	Huntsville, AL	02/10/2004	02/13/2004

OSHA INSPECTION

63 **58INS01A**
Length: 36 Hours **Tuition: $960.00**

Purpose. This course provides personnel that are assigned collateral-duty safety and health responsibilities with the program basics from which they can admin-

ister a division/district or FOA safety and occupational health program. This training is also pertinent for those field construction personnel that are assigned quality assurance roles with corresponding safety and health responsibilities.

Description. Lectures, demonstrations, and reading assignments will cover the areas listed below and enable the students to identify safety hazards and areas of noncompliance with Corps of Engineers and Occupational Safety and Health Administration (OSHA) requirements. Specific areas covered include (a) overview of OSHA (current OSHA requirements) and Corps of Engineers safety and health requirements; (b) scaffolding and access; (c) trenching and excavation; (d) temporary electrical service; (e) heavy equipment; (f) personal protective equipment; (g) fire prevention; (h) confined spaces and entry; (i) motor vehicles; (j) safety submittals; (k) accident reporting and recording; and (l) accident prevention plans and hazard analyses.

Prerequisites. Students should be assigned as collateral-duty or project safety person, or assigned as construction representative and/or quality assurance representatives, or other personnel with safety responsibilities, e.g., safety committee members.

Session	Location	Date	
2004-1	Nashville, TN	03/22/2004	03/26/2004
2004-2	Albuquerque, NM	04/26/2004	04/30/2004
2004-3	Huntsville, AL	06/07/2004	06/11/2004

PAINT COATINGS (SUB)

83 **73PCS01A**
Length: 36 Hours **Tuition: $1,380.00**
CEUs: 2.6

Purpose. The emphasis of this course is on the painting of Corps of Engineers civil works structures. Handbooks include the civil works construction guide specification UFGS 09965A, "Painting: Hydraulic Structures and Appurtenant Works" and the engineering and design manual EM 1110-2-3400, "Painting: New Construction and Maintenance."

Description. This course covers the following topics that affect field painting projects: (a) paint selection; (b) surface preparation; (c) application of paint chemistry; (d) application methods and equipment; (e) corrosion principles; (f) inspection; and (g) environmental and safety regulations.

Prerequisites. Nominee must be assigned (a) Occupational Series: Selected 0800 and 1300; (b) Grade: GS-07 and above. Disciplines and grade levels (other than above) are accepted provided nominee's present or anticipated duties require knowledge of paint and coating systems for hydraulic civil works structures. Nominee's job should require knowledge of UFGS 09965A as well as EM-1110-2-3400.

Session	Location	Date	
2004-1	Champaign, IL	02/02/2004	02/06/2004

PAINT, COATINGS AND QA

84 **35PNT01A**
Length: 36 Hours **Tuition: $1,210.00**
CEUs: 3.1 **PDHs: 31** **LUs: 31**

Purpose. This course is designed to reduce painting deficiencies by providing the participant with hands on quality assurance techniques. The basic concepts of paint composition, coating selection, safety, and construction quality management necessary to administer the painting requirements of the plans and specifications will be covered.

Description. Through lectures, hands-on demonstrations and laboratory sessions, this course covers such subjects as paint fundamentals; characteristics and selection of coatings; surface preparation and painting of steel and other metals, concrete and concrete block, wood, plaster, wallboard, and other miscellaneous surfaces; paint defects; paint approval; testing instruments; painting specifications; and safety and environmental considerations. Construction Quality Management, Maintenance Painting, and changes in guidance and regulations affecting painting are emphasized. Recent changes to the UFGS 09900 and 09965 are emphasized to include the use of the Master Painter's Institute (MPI) specifications.

Prerequisites. (a) Grade: All (b) Occupational Series: 0800 and 1300. Other disciplines will be accepted provided nominee's present or anticipated duties require knowledge of coating systems involved in design, construction or facility maintenance. This includes architects and engineers with design, specification and review responsibilities. This course is open to those individuals from DPWs, BCEs, NAVFAC and other government agencies who are responsible for quality assurance, specifying paint requirements for maintenance or new construction and those serving on constructibility review teams.

Notes. Capability to provide customized, onsite training upon request anywhere from 8 to 32 hours is available.

Session	Location	Date	
2004-1	Dallas, TX	02/09/2004	02/13/2004

PAVE DESIGN & CONST

85 **35PDC01A**
Length: 60 Hours **Tuition: $1,990.00**

Purpose. This is a basic course for engineers or technicians responsible for pavement design, construction, and/or maintenance. After completing the course, with proper references, the student should be able to (a) select the best pavement system for a particular application with the consideration of life cycle cost and

maintenance; (b) perform a complete design of flexible or rigid pavement including drainage, subdrainage, and freeze and thawing considerations; and (c) correctly identify major defects in the pavement construction and select the proper remedies to correct the problem.

Description. Through lectures, tours to laboratories, hands-on exercises, and discussions, this course covers the general concept in pavement design and construction, selection of pavement system, design procedures, construction methods, material testing, surface and subsurface drainage design, computer applications, and new technology in pavement construction.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0800 series; (b) Grade: GS-09 or above. Student should have a current or projected assignment as a design or construction engineer or senior technician responsible for pavement and drainage design, construction, or maintenance.

Session	Location	Date	
2004-1	Vicksburg, MS	04/20/2004	04/29/2004

PAVEMENT CONST—QV

400 **35PVQ01A**
Length: 60 Hours **Tuition: $2,180.00**

Purpose. This course identifies and discusses the requirements for verifying the testing, production and placement of pavements.

Description. This course covers current Corps of Engineers techniques for quality assurance of all types of pavements including: (1) subgrade, subbase, and base courses; (2) primes, tacks, and seal coats; (3) surface treatment and slurry seals; (4) plant-mixed bituminous paving mixtures; (5) sampling, testing, handling, mixing, placing, finishing, and curing portland cement concrete pavements. In addition, it covers necessary field tests, interpretation of results, and verification required to assure the production of quality pavements on construction projects. Instruction includes classroom lectures and laboratory demonstrations.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0800, 0801, 0802, 0809, 0810, 0830, and 0850; (b) Grade: GS-05 or above. Students must have current or projected assignments as general or pavement construction quality assurance representatives or related duties at the field level. This course is also well-suited for junior engineers as part of the training provided in engineer-in-training programs and for Corps division, district, and field office personnel directly concerned with construction operations. The attendee must not have attended this course or a similar course within the past 5 years.

Notes. Course is also valuable to personnel in other series such as 1102 for them to appreciate how pavements are designed, tested and constructed.

Session	Location	Date	
2004-1	Vicksburg, MS	01/21/2004	01/30/2004

PAVEMENT EVAL/REPAIR

115 **75PER01A**
Length: 60 Hours **Tuition: $2,200.00**

Purpose. This course provides engineers, engineering technicians, and qualified shop foremen with tools and techniques for pavement evaluation and project development to the design stage.

Description. This course focuses on engineering selection of maintenance and repair for techniques and current technology for effective selection of maintenance and repair for installation pavements. This course provides a sequential approach to data gathering and identification of pavement distresses, their causes, and alternative maintenance and repair techniques. The course also includes project level evaluation, including field and laboratory measurements, nondestructive testing, materials engineering, technical analysis, and preliminary design of feasible alternatives. The relationship of these activities to the PAVER Pavement Management System will be introduced.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0800; (b) Grade: GS-05 or above and qualified maintenance foremen (WB-4704/-4703).

Session	Location	Date	
2004-1	Vicksburg, MS	05/18/2004	05/27/2004

PAVEMENT MAINT TECH

125 **75PMT01A**
Length: 36 Hours **Tuition: $1,560.00**

Purpose. This course teaches methods and techniques for maintenance and repair of pavements.

Description. This course focuses on practical and effective maintenance and repair methods and techniques. Emphasis is on field demonstrations, with supplementary lectures, films, and handout materials. Techniques and applications taught are those which can reasonably be accomplished by facilities engineer in-house activities, but course material also covers recurring and cyclic maintenance requirements and approaches to implementation of preventive maintenance.

Prerequisites. Nominees must be assigned to an activity with responsibility for maintenance, repair and improvements of installation facilities (e.g., Army facilities engineer, Air Force base civil engineer) or Corps of Engineers field operations and maintenance activities. This course is designed for maintenance personnel and interested technical staff.

Session	Location	Date	
2004-1	Vicksburg, MS	02/23/2004	02/27/2004

PCA/FINANCE PLAN DEV

315 **46LCA01A**
Length: 28 Hours **Tuition: $1,770.00**

Purpose. This course provides project managers, real estate specialists, counsel, and others working project cooperative agreements with the basic knowledge, skills, and abilities needed to develop PCA packages and to conduct financial analyses during project planning and implementation. Participants will learn critical aspects of managing the PCA process from understanding the fundamentals of project finance and financial analysis principles and methods, its relationship to program/ project management, funding and construction scheduling and the new start Project Cooperation Agreement (PCA), policy, development, and negotiation.

Lecturers and instructors include the HQUSACE Civil Works staff, field personnel, and representatives of the non-Federal sponsor.

Description. Topics include: (a) Policy for New Start/ Project Cooperation Agreement Process, Development Negotiation and Processing; (b) Planning, Policy, Program, Real Estate, and Legal Considerations; (c) Non-Federal Financing Considerations; (d) Municipal Finance/Credit Analysis/Cost/Revenue and Fiscal Analysis; (e) Program Management and Implementation Procedures and Applications; (f) Budgeting, Funding, and Construction Scheduling; (g) Policies and Procedures to Account for Project Funds, (h) Project Examples and Experiences, and (i) Legal Aspects.

Prerequisites. Nominees must be assigned (a) Grade: GS-09 to GS-15; (b) current responsibilities in project planning, study management, engineering management, economic analysis, project management, real estate, local cooperation, new start budget development, legal review, or assigned to the Office of Counsel.

Session	Location	Date	
2004-1	San Francisco, CA	03/23/2004	03/26/2004
2004-2	Boston, MA	08/10/2004	08/13/2004

PERS PLNG MGT

717 **48PPM01A**
Length: 16 Hours
Video Run Time: 1.2 Hours **Tuition: $650.00**

Purpose. Prepare Civilian Personnel Office personnelists for their role in mobilization planning and management. Upon completion, personnelists should be able to prepare and maintain a mobilization plan that can be executed quickly and efficiently during any national emergency.

Description. The training materials include one 1/2" videotape cassette, a Facilitator's Guide, and a Student Study Guide. Personnelists with these assigned duties will be able to describe the mobilization process, and prepare and maintain a mobilization plan. Tasks which must be accomplished in support of mobilization will be the basis for the plan.

Modules/Submodules. (a) Introduction to Personnel Planning and Management for Mobilization: (1) General Corps Functions, (2) Human Resources Responsibilities, and (3) Human Resources Office Functional Responsibilities; (b) Position Management and Classification (PM&C): (1) Planning for Mobilization and (2) Implementing Management Procedures; (c) Recruitment and Placement (R&P): (1) Planning for Mobilization and (2) Implementing Management Procedures; (d) Training and Development (T&D): (1) Planning for Mobilization and (2) Implementing Management Procedures; (e) Technical Services (TS): (1) Planning for Mobilization and (2) Implementing Management Procedures; (f) Management Employee Relations (MER): (1) Planning for Mobilization and (2) Implementing Management Procedures; and (g) Mobilization Model Plan.

Prerequisites. Students should be assigned to or expect to be assigned to jobs in a personnel office during mobilization.

PHYSICAL SECURITY

719 **55PPS01A**
Length: 8 Hours
Video Run Time: 2.25 Hours **Tuition: $1,250.00**

Purpose. This course trains Corps of Engineers employees, project managers, and supervisors of civil works projects to recognize, evaluate, implement, and maintain the physical security posture of their facilities.

Description. The topics covered are divided into eight modules as follows: (a) Protecting Our Natural and National Resources; (b) Physical Security Planning; (c) Protective Measures and Deterrence; (d) Inspection Procedures; (e) Physical Security Requirements for Corps Facilities; (f) Coordination; (g) Preparation for Mobilization and National Emergencies; and (h) Project Physical Security Plan.

This course contains practical exercises that are situation-dependent. Additional time should be allowed for each optional practical exercise scheduled by the facilitator.

Potential Students. This course is designed for all managers and supervisors of Corps civil works projects, security personnel, ranger personnel, and any employee desiring an increased awareness of physical security.

PLN-PRIN PROC

77 **35PPP01A**
Length: 36 Hours **Tuition: $1,220.00**

Purpose. This course provides district and division planners with an overview of how Corps of Engineers

water resource projects are planned in accordance with current policies and procedures.

Description. Upon completion of the course, ths student will have a basic understanding of the principles and policies guiding the planning of Corps Civil Works water resources development projects. Policies and procedures are discussed in a series of short presentations by HQUSACE staff and through class participation in small group exercises. Presentations and class exercises focus on case studies designed to illustrate the planning process and application of guidance and policy. The course presents the basic procedures that enable the student to conduct the planning process under today's requirements. The course covers interaction among the district, division, HQUSACE, Army, and the Administration, and includes a session on new directions in planning. The course is conducted in an informal atmosphere to encourage class interaction.

Prerequisites. Participants should be currently involved in the planning of civil works water resources development projects. Prior completion of the PROSPECT Course, "Civil Works Orientation" is highly recommneded.

Session	Location	Date
2004-1	Chicago, IL	05/10/2004 05/14/2004
2004-2	Boston, MA	07/19/2004 07/23/2004

PMBP FACIL TRNG WS-VTC

823 **Length: 12 Hours**

Purpose. This course provides USACE personnel with basic facilitation skills necessary to lead/facilitate small group discussions. The subject of the small group discussions will be Project Management Business Process (PMBP). An orientation program for facilitators will provide specifics on supporting the PMBP.

Description. Basic facilitation skills are provided to give the students the necessary tools to facilitate small group discussions. The course consists of such topics as program overview, discussion techniques, adult learner, questioning techniques, roles and feedback. Special emphasis will be given to how best use these tools to convey the PMBP as the way the Corps conducts its business. PMBP topics will include Why PMBP?; Teams and Me; Public Service and Me; The Organization, Teams, and Me; Quality and the Project Delivery Team; Working in the PDT; Success, the PDT, and Me; Your Call to Action.

PMP EXAMINATION REVIEW

711
Length: 15 Hours **Tuition: $400.00**

Purpose. The Professional Development Support Center (PDSC) is partnering with the University of Alabama in Huntsville (UAH) to offer you the Project Management Certificate Program. This program consists of seven core courses which make up two tracks of study. The first six courses make up Track One which is a general overview of the Project Management knowledge and skills areas. You can take one, two, or all of these courses depending on your individual needs.

Track Two consists of the PMP Examination Review and is intended to prepare Project Managers for the Project Management Professional Examination offered by the Project Management Institute (PMI). The PMI awards Project Management Certification for the successful completion of the Project Management Professional Certification Examination.

The UAH Professional Development Project Management Certificate Program certificate is awarded after the successful completion of the seven core courses.

These courses will be taught via the PDSC VideoTeleconferencing System. They will originate at PDSC and be broadcast to your respective site.

Description. PMP Examination Review is intended to prepare Project Managers for the Project Management Professional (PMP) Certification Exam offered by the Project Management Institute. The PMP Certification Exam is comprised of 200 questions focusing on the five Process Groups: Initiating, Planning, Executing, Controlling, and Closing, covering the nine Knowledge Areas: Scope, Quality, Time, Cost, Risk, Human Resources, Procurement, Communications, and Integration Management, as delineated in the latest version of the Project Management Institute's "A Guide to the Project Management Body of Knowledge. If you have completed the five core courses in the Project Management Certificate Program or have equivalent experience and want a compressed, targeted approach toward review and PMP Certification exam preparation, this is the course for you. Tips to successful exam prep and performance will be discussed.

PREVENTION OF SEX HARASS-WBT

822
Length: 30 Minutes
Web-Based: Self-Paced **Tuition: N/C**

Purpose. Prevention of Sexual Harassment remains a mandatory course for Federal Government civilian and military personnel. This course is designed as the annual POSH refresher course for USACE personnel.

Description. This course discusses USACE policy and practice on prevention of sexual harassment. Various definitions, behaviors, and scenarios will be portrayed to help students understand what sexual harassment is and how to prevent it. Identifying unacceptable behavior, understanding personal roles and responsibilities and knowing what actions to take will be stressed. Procedures and points of contact for reporting incidents of sexual harassment and a link to on-line regulations are provided.

PROB IN GEOTECH ENGR

279 **35PRG01A**
Length: 36 Hours

Purpose. Corps of Engineer policy stipulates that reliability analysis will be used in planning, major rehabilitation, and dam safety projects. This course trains civil engineers who have responsibilities in geotechnical, HTRW, or structure design fields in the area of reliability analysis.

Description. Through a series of lectures and practical exercises, students will study element of probability, distribution models, reliability analysis, and parameter estimates. Finally, the students will be taught step by step the detail procedure he needed in reliability analysis applied to seepage, and slope stability analysis.

Prerequisites. (a) Occupational series: 0810, Civil Engineer; (b) Grade: GS-07 and above; and (c) This course is meant primarily for those civil engineers with geotechnical, HTRW, or structure design responsibilities.

PROJ MGT - ENV REMEDIATION

260 **46ENV01A**
Length: 36 Hours **Tuition: $1,950.00**
CEUs: 3.0 **LUs: 30**

Purpose. District project managers, and other Project Delivery Team members, will learn the Corps' requirements, policy and procedures for managing projects that control, remove or treat Hazardous, Toxic, and Radioactive Waste (HTRW) and/or Ordnance and Explosives (OE).

Description. This course focuses on HTRW/OE environmental restoration and clean up projects in the following Corps programs: Formerly Used Defense Sites, Installation Restoration Program, Base Realignment and Closure, U.S. Environmental Protection Agency Superfund Program, Formerly Used Sites Remedial Action Program, and Environmental Support for Others. Short reviews of these programs, applicable laws and regulations, and project management concepts are included. Requirements of ER 5-1-11 U.S.Army Corps of Engineers Business Process are presented. The course emphasizes topics unique to the Corps Project Management Business Process. Program-specific topics as well as general topics common to all HTRW/OE projects are presented: Project initiation, planning, execution and control and operation and maintenance. Instruction utilizes lectures, videos, discussions and case studies with emphasis on student participation — including team exercises with presentations.

Prerequisites. Applicants need knowledge of fundamental project management principals, terminology, techniques and tools. Applicants should have general familiarity with HTRW/OE environmental laws and regulations. Recommended preparatory PROSPECT courses include: Environmental Restoration Overview (No. 350)and CERCLA/RCRA (No. 356). Applicants must be GS-09 or above. Selection priorities are: first, Corps district employees with a current or projected assignment as a project manager and/or a member of a project delivery team including customers in one of the above programs; second, immediate supervisors of employees potentially eligible for priority one; and third, Corps program managers or functional managers with HTRW/OE responsibilities, or applicants from other agencies.

Session	Location	Date
2004-1	Albuquerque, NM	05/11/2004 05/13/2004
2004-2	Wilmington, NC	08/17/2004 08/19/2004

PROJ MGT - MIL PROG

88 **46PMM01A**
Length: 36 Hours **Tuition: $1,190.00**
CEUs: 3.1 **PDHs: 31** **LUs: 31**

Purpose. This intermediate level course provides the project manager in a programs/project management division with management procedures, tools, and techniques necessary to effectively manage military construction (MILCON) projects from design authorization through construction completion.

Description. Through lectures, directed discussions, and case studies, this course covers the entire spectrum of project management of military programs. It includes the MILCON budget cycle, regulations and philosophy, planning and programming, the design process, A-E and in-house design management, A-E selection and negotiations, project advertising and award, and project management responsibilities during the construction phase. It also addresses project management business process (PMBP)requirements contained in ER 5-1-11, U.S. Army Corps of Engineers Business Process.

Prerequisites. Nominees must be Grade: GS-09 or above. First priority will be given to personnel currently assigned as a military programs project manager. Second priority will be given to those personnel currently assigned to a military project delivery team.

Session	Location	Date
2004-1	Huntsville, AL	02/02/2004 02/06/2004
2004-2	Las Vegas, NV	06/07/2004 06/11/2004

PROJ TEAM DEVEL & DYNAMICS

700
Length: 12 Hours **Tuition: $400.00**

Purpose. The Professional Development Support Center (PDSC) is partnering with the University of Alabama in Huntsville (UAH) to offer you the Project Management Certificate Program. This program con-

sists of seven core courses which make up two tracks of study. The first six courses make up Track One which is a general overview of the Project Management knowledge and skills areas. You can take one, two, or all of these courses depending on your individual needs.

Track Two consists of the PMP Examination Review and is intended to prepare Project Managers for the Project Management Professional Examination offered by the Project Management Institute (PMI). The PMI awards Project Management Certification for the successful completion of the Project Management Professional Certification Examination.

The UAH Professional Development Project Management Certificate Program certificate is awarded after the successful completion of the seven core courses.

These courses will be taught via the PDSC VideoTeleconferencing System. They will originate at PDSC and be broadcast to your respective site.

Description. Managing project human resources and communications are two of the most important duties of a project manager. Project managers must keep project owners, team members, management, subcontractors, and others informed of project status, while constantly evaluating where the project is and where it is going. Learn to assess your project communication needs, plan for meeting those needs, and effectively communicate project status and forecasts throughout the project life-cycle. Project managers require an understanding of the human dynamics that impact personal success as a team leader. Learn to develop stronger working relationships with your colleagues while developing skills to evaluate and improve your team's performance.

PROJECT MANAGEMENT

355 **46PJM01A**
Length: 24 Hours
CEUs: 2.3 **PDHs: 23** **LUs: 23**

Purpose. This course is designed primarily for those individuals who are, or will be, a project manager in any program area. Project team members from functions other than project management may benefit through improved understanding of the project manager's roles and responsibilities.

Description. The course provides the basic philosophy of project management, establishes and explains project management objectives, and provides tools for project management. The course seeks, through presentations, discussions, illustrations, and case studies to provide current guidance in using project management techniques. Generic project management tools and techniques are reinforced by the use of civil works and military programs case studies. Instruction covers the development of a project management plan, work breakdown structures, and project schedules; techniques for cost estimating, risk assessment/contingency management; use of parametric and detailed cost estimates, code of accounts; keeping track; work in progress, PM reports; assessing earned value; development of 902 limits; and the project review board process.

Prerequisites. Nominees must be assigned or anticipate being assigned as an individual project manager or technical member of a project team at Grade GS-11 or above. Pocket calculators are needed for case study work.

PROJECT MGT BUS PROC

762
Length: Varies
CD-ROM & Web-Based: Varies **Tuition: N/C**

Purpose. The Project Management Business Process (PMBP) Curriculum Initiative is to develop a curriculum that continues to nurture project management as the business process within the Corps of Engineers and guide an individual or an organization in the progressive development of those skills associated with the PMBP. This training will develop a competency-based curriculum to assist in transforming USACE into a customer-focused, team-based, learning organization through effective implementation of project management as the primary business process. To create and sustain the PMBP requires us to reexamine how all of us do our work - changes in beliefs, role relationships, behaviors, and attitudes - and our culture.

Description. The PMBP Curriculum Initiative involves the design, development and delivery of learning events in support of the PMBP, as well as the quick and economical implementation of this curriculum throughout the work force. A number of learning and support methods will be used. Methods include self-paced learning via CD-ROM and the Internet, small group discussions (SGDs), mentoring and coaching, classroom training, or a combination of these methods. The curriculum contains an Introduction and Tour Guide, and eight courses. The courses are: Why PMBP?; Teams and Me; Public Service and Me; The Organization, Teams, and Me; Quality and the Project Delivery Team; Working in the PDT; Success, the PDT, and Me; and Your Call to Action.

PROJECT PLANNING-ENV/OE

224 **56TPP01A**
Length: 20 Hours

Purpose. This workshop will enable students to develop the components of a Project Management Plan (PMP) related to customer scope and requirements and Project Delivery Team (PDT) establishment using the strategies presented in EM 200-1-2: Technical Project Planning (TPP) Process. This workshop supports the Project Management Business Process (PMBP) for new and ongoing environmental and ordnance and explosives (OE) remediation/response projects. This workshop covers the development of project objectives that assists the PDT in successfully achieving site

closeout. This Project Planning Workshop also satisfies the EPA requirements for a Systematic Project Planning Process (Order 5360.1, Change 1).

Description. The TPP process is a four-phase approach that provides the framework to fully scope the project, its data needs,and the sampling and analysis methods to best obtain the data. Data Quality Objectives (DQOs) are documented so that the efforts are focused, but also preserved for historical use. The TPP process improves communication by bringing teams together working on a common goal-finishing projects. This process is brought to life during a 2.5-day workshop that uses a series of lectures and a hands-on case study. Participants, divided into project delivery teams, use the TPP process to guide the project to success. The TPP process is being used by Corps PDTs, including customers, regulators, and stakeholders. The students learn how the synergy of working in concert with all team members at the beginning of the project can lead to a more timely and cost effective solution. The following are the key concepts covered during the workshop: establishing multi-disciplinary teams (PDTs), understanding and respecting all perspectives including stakeholders and regulators, creating documentation for inclusion in the Project Management Plan, defining site closeout, identifying executable project stages, develop consensus on project objectives, evaluating existing project information, ensuring Conceptual Site Model (CSM) is understood and accepted by all team members, establishing data quality needs and DQOs for each piece of data, understanding constraints and dependencies, communicating with PDT members including stakeholders.

Prerequisites. Target audience nominees may be managers, technical and other personnel responsible for engineering, scientific, and legal aspects of the USACE environmental restoration/OE response projects through either a current or projected assignment. This includes HTRW and OE project managers, chemists, geologists, hydrogeologists, industrial hygienists, OE safety specialists, health physicists, legal counsel, regulatory specialists, remediation designers/engineers, risk assessors and other potential PDT members. Nominees must be in grade GS-07 and higher.

PROJECT PROCUREMENT

705
Length: 12 Hours **Tuition: $400.00**

Purpose. The Professional Development Support Center (PDSC) is partnering with the University of Alabama in Huntsville (UAH) to offer you the Project Management Certificate Program. This program consists of seven core courses which make up two tracks of study. The first six courses make up Track One which is a general overview of the Project Management knowledge and skills areas. You can take one, two, or all of these courses depending on your individual needs.

Track Two consists of the PMP Examination Review and is intended to prepare Project Managers for the Project Management Professional Examination offered by the Project Management Institute (PMI). The PMI awards Project Management Certification for the successful completion of the Project Management Professional Certification Examination.

The UAH Professional Development Project Management Certificate Program certificate is awarded after the successful completion of the seven core courses.

These courses will be taught via the PDSC VideoTeleconferencing System. They will originate at PDSC and be broadcast to your respective site.

Description. This class takes a detailed and operational view of the project procurement and contract management process. You will be introduced to the procurement, solicitation, and contract process. Examine an overview of all phases involved in contracting from requirements generation to close out as well as management of the contract with your customer or supplier. You will learn about the common elements of subcontract and contract administration. Learn how to be more successful in the present environment of limited support resources. Special attention is given to the project manager's role in ensuring that your contracting practices maintain the highest level of business and professional ethics. A systematic approach will aid you in developing an in-depth understanding of buyer-seller relationships, direct and indirect costs, preparation of specifications and bids, and the multiple complexities of contract administration.

PROJECT SCHEDULING (NAS)

80 **46NWA01A**
Length: 36 Hours **Tuition: $830.00**
CEUs: 2.9 **PDHs: 29**

Purpose. The Corps of Engineers manages many projects in project management, engineering, and construction that require scheduling. The scheduling technique that this course covers is useful on any complicated project with varied aspects and resources required. The course was primarily developed to introduce the concept of network scheduling to construction personnel, and it is so oriented in its examples. However, a half day session has been added to the course that utilizes a network based Project Management Plan (PMP) for Civil Works Management. While this class does not provide a hands-on application of specific scheduling software, the course provides an introduction and understanding of basic network scheduling and manual and computer analysis in both original schedules and progress updates in a variety of software packages.

Description. After completing the course, the student should be able (1) to prepare, review, analyze, and update network analysis systems, and (2) to make practical use of the information derived from the system.

Through lectures and workshop sessions, the course covers logic development and basic diagramming techniques; analysis of diagram for starting and finishing times; development of a diagram for a construction project; utilization of a network diagram and update data for approval, control, and modification of a contract; determination of payment and progress; effects of strikes or stoppages, materials delivery, and adverse weather or other delays; and additions to the contract. Editing specifications for requirements of NAS in construction contracts and other uses of the system are also presented. ER 1-1-11 and EP 415-1-4 are used for reference.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0340, 0800, 0905, and 1100; (b) Grade: GS-09 or above. Students should have a current or projected assignment requiring knowledge of network analysis as a management technique. Prior knowledge of a network system is not required. This course is highly desirable for Corps division and district engineers and for division, branch, and section heads of construction, operations, and engineering divisions, area engineers, resident engineers, office engineers, other quality assurance representatives, project and/or technical managers, and trial attorneys.

Session	Location	Date	
2004-1	San Francisco, CA	12/01/2003	12/05/2003
2004-2	Huntsville, AL	03/08/2004	03/12/2004
2004-3	Virginia Beach, VA	06/07/2004	06/11/2004

PROJECT SCOPE MANAGEMENT

701
Length: 12 Hours **Tuition: $400.00**

Purpose. The Professional Development Support Center (PDSC) is partnering with the University of Alabama in Huntsville (UAH) to offer you the Project Management Certificate Program. This program consists of seven core courses which make up two tracks of study. The first six courses make up Track One which is a general overview of the Project Management knowledge and skills areas. You can take one, two, or all of these courses depending on your individual needs.

Track Two consists of the PMP Examination Review and is intended to prepare Project Managers for the Project Management Professional Examination offered by the Project Management Institute (PMI). The PMI awards Project Management Certification for the successful completion of the Project Management Professional Certification Examination.

The UAH Professional Development Project Management Certificate Program certificate is awarded after the successful completion of the seven core courses.

These courses will be taught via the PDSC VideoTeleconferencing System. They will originate at PDSC and be broadcast to your respective site.

Description. Project Scope Management will focus on the processes involved in preparing and refining the technical performance parameters of the project. Dealing with the entire life cycle of a project and the critical technical performance decisions incident to each phase, you will learn practical skills as well as the theory of project scope management. The interrelationship of technical performance or "scope" factors and their impacts on other parts of the project will be explored. Learn to differentiate a project, a program, and a subproject, identifying contrasting characteristics of each as well as what makes them related endeavors. Emphasis will be placed on developing effective alternatives to problems as well as how to independently verify the requirements of a project. You will learn that the process phases involved in scope management are the foundation to a project and are key to all other parts of a project.

PROJECT TEAMBUILDING

383 **15PTL01A**
Length: 36 Hours **Tuition: $2,970.00**

Purpose. This course is designed to prepare project managers to deal more effectively with the difficult and demanding tasks of managing organizational and people problems. These challenges are natural in project management and have far greater influence on project success than do the tools and techniques such as PERT, work breakdown schedules, earned value controls, etc.

Description. The course will focus on four major objectives: (1) Understanding the reality of the project manager's job. This includes profiling the successful project manager and learning how to start and lead project teams; (2) Developing the capability to succeed in project environments. This objective covers understanding different project structures and advantages and disadvantages of each. Learning to develop networks to gain influence over important decisions; (3) Understanding and developing critical personal and interpersonal skills. A few topics covered under this objective are; receiving feedback in their leadership decision making style, practicing conflict resolution methods, developing methods to better manage relationships with customers, peers and bosses; (4) Developing a workable philosophy of project planning and control. This includes exploring classic project planning and control issues, understanding the meaning of Eisenhower's dictum "Planning is everything, plans are nothing" and learning that control systems provide signals, not solutions.

Objectives are taught by lectures combined with case studies, small group exercises and other interactive methods to provide maximum exchange of ideas and information.

Prerequisites. Students should be project managers with 2 or more years experience in project management in grades of GS-12 and GS-13.

Session	Location	Date	
2004-1	Knoxville, TN	03/01/2004	03/05/2004
2004-2	Knoxville, TN	06/07/2004	06/11/2004

PUBLIC INVOLVE COMM

91 **53PIC01A**
Length: 36 Hours **Tuition: $950.00**

Purpose. This course is for staff whose responsibilities require communicating with the public about agency activities. The purpose of the course is to present the rationale for public involvement in Corps of Engineers activities and to present basic communications and group process techniques to enable Corps employees to more effectively interact with the public.

Description. The course utilizes team workshops, lectures, and case studies to present and demonstrate the utility of a wide-range of formats, techniques, and methods for public involvement. Topics covered in this course are: the public's role in decision-making; applying public involvement in Corps of Engineers activities; defining agency value systems; distinguishing policy (political) from technical decisions; designing a public involvement program; facilitation and small group leadership skills; listening and sending skills; designing public meetings and workshops; the role of values in public involvement; and dealing with conflict.

Prerequisites. Nominees should be assigned (a) Occupational Series: selected 0100, 0020, 0021, 0023, 0025, 0026, 0300, 0400, 0800, 1000 and 1300; (b) Grade: GS-05 through GS-11 (water resources planners, study managers, project managers, rangers, park managers etc) - anyone potentially involved with public involvement during the planning, design, construction or operation of a project.

Session	Location	Date	
2004-1	Huntsville, AL	07/19/2004	07/23/2004

PW IFS MGMT COURSE

984/CECPW **54PB101A**
Length: 32 Hours **Tuition: $800.00**

Purpose. To understand Integrated Facilities System (IFS) Capabilities: Maximize use of IFS as a decision making tool and to assess key performance indicators to implement process improvements or evaluate contractor performance.

Description. This course will involve 4 levels of Management: (1) Executive Level: which will define facility management executive level information; familiarize the Directorate of Public Works (DPW) and management personnel with the IFS hierarchy and structure to better understand its functionality. (2) Industrial Engineering Principles: demonstrate practical techniques through data export and import into graphical presentations software. (3) Activity Based Management: apply ABM principles to the R&A process and use IFS as a means for activity based costing and primary data source for analysis. (4) Installation Executive Information System (IEIS-HQEIS): demonstrate value of EIS and purpose and show and demonstrate how EIS links to other systems.

Prerequisites. DPW Management Orientation Course # 989 or DPW Basic Orientation Course # 988. The target audience for this class is DPW Branch and Division Chiefs, DPW Operations, ACSIM Proponents, other installation support personnel, Garrison Commanders, Deputy Commanders.

Session	Location	Dates	
2004-01	Huntsville, AL	10/28/2003	10/31/2003
2004-02	Huntsville, AL	05/11/2004	05/14/2004

QAE/PI

978 **54QAE01A**
Length: 32 Hours **Tuition: $830.00**

Purpose. Develop queries and reports to obtain and analyze data for process improvements. Course is needed to show business area managers how IFS can assist them in their business practices.

Description. Topics that will be covered in this course are: Customer Service, Job Cost Accounting, Real Property Accountability, Planning, Data Verification, Backlog, work distribution, grouping tasks for efficiency, customer reimbursement, response times met, Benchmarking, interpreting and analyzing data.

Prerequisites. Course is for Supervisors, Facility Managers & (Assistants), Management Analysts, Budget Analysts, Planners and Schedulers, Industrial Engineers at the GS-7 level or higher.

Prerequisites: SQL FOR IFS.

QUAL MGT & PERFORMANCE MEASUREMENT

710
Length: 12 Hours **Tuition: $400.00**

Purpose. The Professional Development Support Center (PDSC) is partnering with the University of Alabama in Huntsville (UAH) to offer you the Project Management Certificate Program. This program consists of seven core courses which make up two tracks of study. The first six courses make up Track One which is a general overview of the Project Management knowledge and skills areas. You can take one, two, or all of these courses depending on your individual needs.

Track Two consists of the PMP Examination Review and is intended to prepare Project Managers for the Project Management Professional Examination offered by the Project Management Institute (PMI). The PMI awards Project Management Certification for the successful completion of the Project Management Professional Certification Examination.

The UAH Professional Development Project Management Certificate Program certificate is awarded after the successful completion of the seven core courses.

These courses will be taught via the PDSC Video Teleconferencing System. They will originate at PDSC and be broadcast to your respective site.

Description. Quality Management and Performance links the concepts of quality management and performance measurement from planning to close out. Learn about the concern for effective proactive control and adjustment of implemented project plans with special emphasis on control techniques and their integration with cost and schedule. Emphasis will be placed on the methodologies and techniques for controlling project performance by integrating technical performance management, schedule compliance, and cost management activities in an earned value approach. You will examine the tools and techniques available to the program manager to help manage the program and analyze and use data generated by the internal program control system. Additionally, you will learn major methods of presenting technical and performance data to customers, and managing computer-based information systems and associated databases. Find out how to interface effectively with customers on critical project parameters.

RAD WASTE TRANSPORT

441 **56RWP01A**
Length: 24 Hours **Tuition: $1,710.00**

Purpose. This workshop provides initial training regarding the regulatory requirements of the Hazardous Materials Transportation Act (HMTA) as it applies to the offsite transportation of Class 7 and Class 9 Radioactive Wastes. It enables employers to certify as required in 49 CFR 172 Subpart H, that their employees have been trained and tested in general awareness and function-specific elements as described below. In addition, this is a DoD approved course as per DoD 4500.9-R, Oct 99. (Note: Certain safety related training elements required by 49 CFR 172 Subpart H are site-specific and must be performed on the job.)

Description. This workshop is designed to instruct the student on the Department of Transportation (DOT) requirements pertaining specifically to radioactive wastes, in particular, remediation wastes from radioactive sites such as FUSRAP sites and military installations. This workshop is focused on the DOT regulations associated with Class 7 and Class 9 radionuclides. Course contents include, but are not limited to, determining if the material meets a Class 7 or Class 9 hazard class, DOT subtyping (Excepted, Type A, Type B, HRCQ, LSA, SCO etc), determining the proper shipping names, markings, labelings, and packagings and determining the correct shipping paper requirements. There is minor discussion on the Nuclear Regulatory Commission (NRC) regulations as they relate to transportation. (Note: A scientific calculator must be brought to class. A worksheet on scientific notation and International System of Units (SI) conversions for radiological units of measure will be sent before the class to be completed prior to arriving for workshop.)

Prerequisites. This course is primarily targeted at persons in the following series: 0820, 0809, 0810, 0819, 0028, 0029, 0025, 0026, 0401, 1350, 1301, 0893, 0830, 1306, and 1320. (All series involved with environmental programs, including all engineers, chemists, industrial hygienists, health physicists, biologists, geologists, hydrogeologists, program managers, planners, etc.) The training is designated for persons who may be overseeing, arranging, or managing the offsite transportation of Class 7 or Class 9 radioactive wastes, or shipments of analytical samples from radioactively contaminated sites to laboratories. In addition, students are advised that an extremely helpful course would be the Hazardous Waste Management, Manifesting/DOT Certification PROSPECT Course #223. This is not a required prerequisite. Students should be advised that Course #223 must be taken if certification is required for hazardous materials or wastes other than Class 7.

Session	Location	Date	
2004-1	Virginia Beach, VA	06/29/2004	07/02/2004

RAM-D

269 **35RAM01A**
Length: 36 Hours **Tuition: $1,270.00**
CEUs: 2.9 **PDHs: 29**

Purpose. As this country extends its journey into the age of information and the global economy, it has come to realize that its dependence on critical national infrastructures is greater than ever. Dams, with their hydroelectric generation, flood control, recreation, navigation, ecological and water supply functions represent an important national infrastructure. Protecting our dams against such threats as unfriendly foreign nationals, terrorist groups, ecological and environmental activists, criminals, and disgruntled employees is an important responsibility. Trainees completing this course will obtain RAM-D proficiency in procedures for completing threat assessments, consequence assessments, evaluating existing security systems, functioning as a critical member of a RAM-D assessment team and providing management recommendations to the same.

Description. Through a series of lectures, practical exercises, and a visit to a dam site, trainees will cover the following aspects of RAM-D: a) Background and purpose; b) Project definition; c) Screening; d) Planning; e) Site survey; f) Analysis; g) Reduction of risk; h) Evaluate impacts; i) Final reporting to management.

RAM-D has the following objectives: a) To set forth a procedure for completing a threat assessment that determines the likelihood that an adversary will attack a critical asset to achieve a particular consequence and succeed in defeating the security system; b) To provide

a procedure for completing a consequence assessment should an adversary be successful in disrupting, disabling, or destroying the missions of the entire dam project complex; c) To provide a systematic process for determining the effectiveness (or ineffectiveness) of the security protection system to prevent a successful attack against an operational component of the dam project; d) To provide the procedure for completing a risk assessment that allows the manager to evaluate the level of risk associated with the threat, consequences, and protective system and determine the needs for directing an implementation of security upgrades or plans for risk reduction, as appropriate for the characteristics of the subject dam.

Prerequisites.
(a) This course is meant primarily for personnel involved in the physical security of dams.

(b) Occupational series: 95B NCO (Military Police) with physical security experience; b) 31A Officer (Military Police) with physical security experience; c) Electronic and physical security officers, communication and technical officers; d) Electrical, civil, mechanical and security engineers involved in the physical security of dams; e) Civil Works Project Personnel.

(c) Grades: GS and WG as appropriate.

Session	Location	Date
TBD		

RE ACQUISITION 101

79 **49REA01A**
Length: 36 Hours **Tuition: $1,170.00**
CEUs: 3.0

Purpose. The real estate acquisition mission of the Department of The Army has no counterpart in the private sector. The laws, regulations, and policies pertaining thereto are peculiar to acquisition of real estate by the Federal Government or in conjunction with Federal projects. This course provides a basic overview of the land acquisition policies, procedures and regulations for Army and Corps of Engineers projects.

Description. The course includes lectures, class discussions, problem solving, and testing. Topics for presentation address (a) project planning, documents, and authorities, (b) elementary mapping and legal descriptions, (c) title evidence, (d) just compensation, (e) condemnation, (f) general fundamentals of appraisals for land acquisition, (g) interest and estates in land, (h) local cooperation and cost-sharing, (i) environmental considerations, (j) negotiation skills, and (k) crediting for land provided by project sponsors. After completion of this course, the student should have a foundation upon which, with additional study and experience, a knowledge base in real estate acquisition can be built.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0318, 0905, 1101, 1170, and 1171; (b) Grade: GS-07 through GS-11; (c) personnel primarily assigned to real estate functions within the Corps of Engineers. Individuals outside prerequisite occupational series and grade and those actively engaged in real estate activities (such as planners, project managers, and installation DPW staff) will be considered on a space available basis. Nominees should have a general understanding of the Corps of Engineers organizational structure and have read the Real Estate Handbook, ER 405-1-12, Chapter 2, 5, and 12.

Session	Location	Date
2004-1	Orlando, FL	07/12/2004 07/16/2004

RE ACQUISITION 201

121 **49RA201A**
Length: 28 Hours **Tuition: $1,110.00**

Purpose. The real estate acquisition mission of the Department of The Army has no counterpart in the private sector. The laws, regulations, and policies pertaining thereto are peculiar to acquisition of real estate by the Federal Government or in conjunction with Federal projects. This course provides an advanced overview of the land acquisition policies, procedures and regulations for Corps of Engineers Civil Works water resources projects.

Description. The course includes lectures, class discussions, problem solving, and testing. Topics for presentation include (a) preparation of real estate plans, (b) just compensation, (c) estates in land, including non-standard estates, (d) environmental considerations, (e) Continuing Authority Program (CAP) issues, (f) crediting for land provided by project sponsors, (g) utility and public facility relocations and (h) Project Cooperation Agreement (PCA) principles.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0318, 0905, 1170, and 1171; (b) Grade: GS-11 and above; (c) personnel primarily assigned to real estate planning or acquisition functions for Corps of Engineers Civil Works projects . Individuals must have completed RE Acquisition 101, Course No. 079, 49REA01A, or have equivalent experience or training from another source. Individuals outside prerequisite occupational series and grade and those actively engaged in real estate activities (such as planners, and project managers) will be considered on a space available basis. Nominees should have an advanced understanding of the Corps of Engineers organizational structure and have read the Real Estate Handbook, ER 405-1-12, Chapters 4, 5, 12 and 17.

Session	Location	Date
2004-1	Seattle, WA	04/27/2004 04/30/2004

RE CONDEMNATION

133 **49REC01A**
Length: 28 Hours **Tuition: $1,370.00**
CEUs: 1.9

Purpose. The right of condemnation of real estate has no counterpart in the private sector. The laws, regulations, and policies pertaining thereto are peculiar to condemnation of real estate by the Federal Government or in conjunction with Federal projects. This course provides a basic overview of all facets of condemnation for attorneys and realty specialist involved in land acquisition for Army and Corps of Engineers projects.

Description. The course includes lectures, class discussions, problem solving, and testing. Topics for presentation address (a) preparation of Condemnation Assembly, Declaration of Taking/Complaint, amendments and revestment, and settlements, (b) assistance to the Department of Justice in preparation for trial, (c) trial of cases, (d) general fundamentals of appraisals for land acquisition in support of condemnation, (e) post-trial review, (f) Equal Access to Justice Act (EAJA), and (g) environmental considerations. After completion of this course, the student should have a foundation upon which, with additional study and experience, a knowledge base in real estate acquisition can be built.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0905, 1170, and 1171; (b) Grade: GS-09 and above; (c) personnel primarily assigned to real estate condemnation functions within the Corps of Engineers. Individuals outside prerequisite occupational series and grade and those actively engaged in real estate acquisition activities will be considered on a space available basis. Nominees should have a general understanding of the Department of Justice and Corps of Engineers organizational structure, have read the Real Estate Handbook, ER 405-1-12, Chapter 5, and taken RE Acquisition 101, Course No. 079, 49REA01A.

Session	Location	Date	
2004-1	Western	06/22/2004	06/25/2004

RE INLEASING

102 **49RAL01A**
Length: 36 Hours **Tuition: $1,050.00**
CEUs: 3.0

Purpose. The inleasing mission of the Department of The Army involves acquiring buildings, building space, residential quarters, recruiting stations, and other real estate required for military purposes. Emphasis of this course will be on recruiting stations, being the largest volume of inleasing actions performed by the Corps of Engineers. This course provides the student with the opportunity to become familiar with the basic appraisal procedures used in market rental studies and gives them a basic overview of the inleasing authorities, policies, procedures and regulations for the Corps of Engineers mission.

Description. The course includes lectures, class discussions, practice exercises, a field trip, and testing. Topics for presentation address (a) project planning, documents, and leasehold authorities, (b) general fundamentals of determinations of value for inleasing acquisition, (d) leasehold estates and forms, including mandatory and optional clauses, (e) use of automated Real Estate information systems, (f) lease negotiation skills, and (g) lease administration and support services contracts. After completion of this course, the student should have a foundation in inleasing acquisition. Additional study and experience will still be needed to become an experienced inlease professional.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0905, 1170, 1171; and other series upon approval (b) Grade: GS-05 and above; (c) personnel primarily assigned to real estate functions within the Corps of Engineers. Individuals outside prerequisite occupational series and grade and those actively engaged in real estate activities (such as recruiters and project managers) will be considered on a space available basis. Nominees should have a general understanding of the Corps of Engineers organizational structure and have read the Real Estate Handbook, ER 405-1-12, Chapters 2, 4 and 5.

Session	Location	Date	
2004-1	San Francisco, CA	06/21/2004	06/25/2004

RE MGT AND DISPOSAL 101

7 **49RED01A**
Length: 36 Hours **Tuition: $1,110.00**

Purpose. The real estate management and disposal mission of the Department of The Army has no counterpart in the private sector. The laws, regulations, and policies pertaining thereto are primarily peculiar to the Federal Government. This course provides a basic overview of the Outgrant and Disposal policies, procedures and regulations for Army and Corps of Engineers projects, with emphasis on routine actions that use standard formats, such as licenses and building disposal.

Description. The course includes lectures, class discussions, problem solving, and testing. Topics for presentation address (a) authorities, documents, and procedures for placing property in excess status or to approve disposal; for GSA disposal, agency disposal, or special authority disposal, (b) disposal document preparation, (c) authorities, documents, and procedures for making property available for use by others, (d) routine outgrant document preparation, (i) outgrant management and administration, (j) environmental considerations, and (k) negotiation skills. After completion of this course, the student should have a foundation upon which to begin work on routine actions and, with

additional study and experience, advance to more advanced real estate management and disposal actions.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0905, 1101, 1170, and 1171; (b) Grade: GS-05 through GS-11; (c) personnel primarily assigned to real estate functions within the Corps of Engineers. Individuals outside prerequisite occupational series and grade and those actively engaged in real estate activities (such as natural resource specialist, outdoor recreation planners, park managers, project managers, master planners, and installation DPW staff) will be considered on a space available basis. Nominees should have a general understanding of the Corps of Engineers organizational structure and have read the Real Estate Handbook, ER405-1-12, Chapters 8 and 11.

Session	Location	Date
2004-1	San Antonio, TX	03/01/2004 03/05/2004

RE MGT AND DISPOSAL 201

73 **49RMD01A**
Length: 28 Hours **Tuition: $1,060.00**

Purpose. The real estate management and disposal mission of the Department of The Army has no counterpart in the private sector. The laws, regulations, and policies pertaining thereto are primarily peculiar to the Federal Government. This course provides an advanced overview of the Management and Disposal mission, policies, procedures and regulations for Army and Corps of Engineers projects, with emphasis on complex actions, such as commercial concessions and early transfer disposals.

Description. The course includes lectures, class discussions, problem solving, and testing. Topics for presentation address (a) authorities, documents, and procedures for complex disposals, (b) working with GSA on disposals, (c) management of title, encroachments and boundary disputes, (d) real estate claims, (e) environmental land use controls, compliance and documentation, (f) authorities, documents, and procedures for making property available for use by others, (g) complex outgrant document preparation, (h) outgrant management and administration, (i) jurisdiction and annexation, and (j) negotiation skills. After completion of this course, the student should have advanced to more advanced real estate management and disposal actions, although additional study and experience will be required.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0905, 1170, and 1171; (b) Grade: GS-11 and above; (c) personnel primarily assigned to real estate management and disposal functions within the Corps of Engineers. Individuals must have completed RE Management and Disposal 101, Course No. 007, 49RED01A, or have equivalent experience or training from another source. Individuals outside prerequisite occupational series and grade and those actively engaged in real estate activities (such as natural resource specialist, outdoor recreation planners, park managers, project managers, master planners, and installation DPW staff) will be considered on a space available basis. Nominees should have an advanced understanding of The Army and the Corps of Engineers organizational structure and have read the Real Estate Handbook, ER 405-1-12, Chapters 8 and 11.

Session	Location	Date
2004-1	Honolulu, HI	01/27/2004 01/30/2004
2004-2	San Diego, CA	05/04/2004 05/07/2004

RE PMBP & CONTROL

144 **49RPC01A**
Length: 28 Hours **Tuition: $1,070.00**

Purpose. The real estate planning and control (P&C) function of the Corps of Engineers, Real Estate elements comprises a myriad of duties and responsibilities. This course provides a basic overview of the planning and control policies, procedures and regulations for Corps of Engineers mission support. The course outlines how P&C interfaces with other elements of the Corps and addresses broad aspects of the fiscal, manpower, planning, and real estate management information systems within real estate, Corps of Engineers and the Army.

Description. The course includes lectures, class discussions, problem solving, and testing. Topics for presentation address (a) real estate planning, budgeting, and manpower, (b) real estate surveying, land descriptions, (c) real estate audits and records management, (d) real estate accountability and Chief Financial Officer Act issues, (e) authorities, documents, and procedures, (f) real estate aspects of Life Cycle Project Management, and (gi) use of automated Real Estate information systems and their interaction with other Army and Corps systems. After completion of this course, the student should have a foundation upon which to begin work on routine actions and, with additional study and experience, advance to more advanced real estate P&C actions.

Prerequisites. Nominees must be assigned (a) Grade: GS-05 and above and (b) personnel primarily assigned to real estate functions within the Corps of Engineers. Individuals outside prerequisite grade and those actively engaged in real estate activities (such as natural resource specialist, outdoor recreation planners, park managers, project managers, master planners, and installation DPW staff) will be considered on a space available basis. Nominees should have a general understanding of the Corps of Engineers organizational structure and have read the Real Estate Handbook, ER 405-1-12, Chapters 2, 3, 13, 14 and 15.

Session	Location	Date
2004-1	Savannah, GA	05/17/2004 05/20/2004

RE RELOC ASSISTANCE

193 **49RRT01A**
Length: 28 Hours **Tuition: $1,100.00**

Purpose. The real estate acquisition mission of the Department of The Army has no counterpart in the private sector. The laws, regulations, and policies pertaining thereto are peculiar to acquisition of real estate by the Federal Government or in conjunction with Federal projects. This course provides an Army and Corps focus on the law, uniform regulations, and policies, procedures and regulations for relocation assistance benefits to persons displaced as a result of acquisition of real property for Army and Corps of Engineers projects. The nominee is expected to have a basic knowledge of general real estate principles prior to attending the class.

Description. The course includes lectures, class discussions, case studies, problem solving, and testing. Topics for presentation address (a) the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended and (b) Corps and Army interpretations. After completion of this course, the student should have a basic relocation assistance foundation with Corps specific policies and procedures, although additional study and experience will be required.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0318, 0905, 1170, and 1171; (b) Grade: GS-07 and above; (c) personnel primarily assigned to real estate functions within the Corps of Engineers. Individuals outside prerequisite occupational series and grade and those actively engaged in real estate activities (such as planners, project managers, and installation DPW staff) will be considered on a space available basis. Nominees should have a general understanding of the Corps of Engineers organizational structure and have read 49 CFR Part 24.

Session	Location	Date	
2004-1	Denver, CO	06/08/2004	06/11/2004

RE TRAINING

724 **49RET01A**
Length: 40 Hours
Video Run Time: 2.5 Hours **Tuition: $1,000.00**

Purpose. This course trains Corps real estate personnel who already know civil policies, procedures, functions, and forms for basic operations in civil works acquisition how to perform military realty functions. The exportable training course provides the trainee with instruction in various areas of military real estate activities.

Description. Training is presented in 14 modules of instruction covering the following topics: (a) Real Estate and Mobilization; (b) Authorities and Policies; (c) Development and Approval of Requirements; (d) Planning, Analysis, and Programming; (e) Approvals and Clearances; (f) Direct Purchase of Permanent Interests; (g) Leasing of Real Property; (h) Miscellaneous Interests; (i) Condemnation; (j) Relocation Assistance Services; (k) Relocation, Alteration, Vacation, or Abandonment of Highways, Roads, Railroads, Utilities, and Cemeteries; (l) Functions of the Management and Disposal Division; (m) Functions of the Programs Division; and (n) Planning for Future Mobilization. These modules are further divided into 31 submodules.

This exportable training course has two 1/2" videocassettes, a Facilitator's Guide designed to assist the facilitator in leading the training, Student Study Guides containing job performance aids, task-active exercises for "hands-on" experiences, sample forms, references, and an acronym list. Training encompasses approximately 2.5 hours of video instruction broken into training segments of 5-15 minutes. Total training requires approximately 40 hours of interaction between the students and the facilitator.

Potential Students. This course is designed primarily for realty specialists. However, the instruction is beneficial for supervisors and other Corps realty employees.

REAL PROP MGT

286 **49RPM01A**
Length: 30 Hours **Tuition: $770.00**
CEUs: 2.9

Purpose. This course is designed as an introduction to Army Military Real Property Management, as well as a means of providing Army Military Real Property personnel up-to-date information on changes and issues relating to the responsibilities, regulations, policies, and procedures of Army Military Real Property Management from an installation and HQDA perspective The objective of the course is to provide an overall understanding for the new Army military real property person and also to enhance the experienced real property person's knowledge of the functions of Army Military Real Property Management.

Description. This course provides the most up-to-date information on the very broad range of Army military real property management responsibilities at the installation level and HQDA requirements through lectures, case studies, group interaction and practical exercises. This course will provide the most current information on Army military real property accountability, to include requirements of the Chief Financial Officers Act for Real Property Accountability and Reporting, space utilization, acquisition, disposals, outgrants, natural and cultural resource requirements, and environmental documentation, the McKinney Homeless Assistance Program, annexation, jurisdiction, encroachments, privatization, and automated management systems associated with Army military real property management and accountability.

Prerequisites. Nominees should include personnel both directly and indirectly associated with the management of Army real property at the installation, MACOM, MSC, USAR, RSC, USACE divisions/districts, and supporting contractors.

Session	Location	Date
2004-1	Huntsville, AL	03/29/2004 04/02/2004
2004-2	Western	09/13/2004 09/16/2004

REAL PROP SKILLS

150 **46RPS01A**
Length: 32 Hours **Tuition: $1,000.00**

Purpose. This course provides basic skills for Army Military Real Property clerks, specialists, and officers on the use of the Army Military real property automated system module of the Integrated Facilities System (IFS) and the basic knowledge of Army Military Real Property.

Description. This course covers the preparation and acceptance of the DD Form 1354 and DA Form 337; also through lectures and hands-on computer exercises the course covers the process and procedures for the accounting of Army Military Real Property, management of Real Property/Real Estate and data input and use of IFS used to maintain the of Army Military Real Property. The course will provide for the most recent updates in the procedures and input of the Army Military Real Property Inventory and accountability.

Prerequisites. Attendees should be engaged in the accountability and management of Army Military Real Property /Real Estate. Participation requires the fundamental knowledge of Army Military Real Property/Real Estate and the automated system, IFS used to maintain the Army Military Real Property Inventory.

Session	Location	Date
2004-1	Huntsville, AL	02/23/2004 02/26/2004
2004-2	Huntsville, AL	09/13/2004 09/16/2004

REAL TIME WTR MGT MDL/CWMS

155 **35RTW01A**
Length: 36 Hours **Tuition: $1,890.00**

Purpose. The Corps Water Management System (CWMS) is the automated information system (AIS) supporting the Corps' water control operations mission. CWMS provides data collection, processing, decision support modeling, data dissemination, and graphics tools to allow each local office to effectively execute their water management mission in real-time. This course will provide water managers the training necessary to effectively use hydrologic and hydraulic modeling software in CWMS for real-time operations. The students will learn advanced features of CWMS, including calibration and execution of model programs in support of the decisions made in the course of Corps project operations.

Description. Topics will include: 1) The use of CMWS hydrologic and hydraulic models (HMS, ResSim, RAS and FIA) through the Control and Visualization Interface (CAVI). 2) Calibration and optimization of model parameters in real-time. 3) How to model and evaluate possible hydro-meteorological and operational scenarios in real-time to improve reservoir operations. 4) Advanced CWMS concepts and tools, such as scripting and trials. This class does not address the installation of CWMS or the development of models.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0400, 0800, and 1300 (b) Grade: GS-09 or above. (c) Nominees should be water control managers, hydrologists, or hydraulic engineers. (d) Nominees should have some experience and responsibility of real-time reservoir or flood control operations and with the H&H models mentioned above.

Session	Location	Date
2004-1	Davis, CA	06/14/2004 06/18/2004

RECORDS MGT PROF DEV

393 **46RPD01A**
Length: 36 Hours **Tuition: $1,900.00**
CEUs: 3.0 **PDHs: 29**

Purpose. This Management Training course is designed only for records administrators/managers and directors of information management responsible for the records management (RM) discipline. Participants are provided a management overview of the major records management subprograms required to oversee and execute this federally-mandated program. Participants benefit by gaining additional insight into the concerns, needs, initiatives, and current issues of the RM discipline.

Description. This course includes the following topics: (a) statutory and regulatory records management requirements; (b) program management responsibilities: (1) records systems, (2) official mail distribution, (3) forms, (4) correspondence, (5) administrative publications, (6) Freedom of Information Act, (7) Privacy Act, (8) CEEDMS, 9) office copier, and (10) vital records; (c) introduction to business process re-engineering; and (f) current issues.

Prerequisites. Nominees shall be assigned (a) Occupational Series: 301, 340, 342, 343, and 344; (b) Grade: GS-05 and above. This course is designed for individuals who spend 80-90 percent of their time in the records management discipline or for information managers who have overall responsibility for this program.

NOTE: While MARKS principles will be briefly discussed, this is NOT a course in files maintenance and disposition, e.g., assigning MARKS numbers.

Session	Location	Date
2004-1	Huntsville, AL	04/19/2004 04/23/2004

REGULATORY I

100 **35RG101A**
Length: 36 Hours **Tuition: $1,000.00**

Purpose. This course provides a comprehensive background in the regulatory program and an understanding of current regulatory policies and procedures.

Description. This course covers a broad range of topics that personnel in the regulatory program must be familiar with in order to do an effective job. Topics to be covered include (a) Background and Program Overview; (b) Permit Process; (c) Jurisdiction; (d) Reviewing and Assessing Applications; (e) 404(b)(1) Guidelines; (f) Compliance and Enforcement; (g) Site Inspection; (h) NEPA Compliance; (i) Special Policies and Procedures; (j) Construction Method; (k) Decision-Making Process/Public Policy Process; (l) Permit Documentation; (m) General Permits; and (n) Conflict Management/Public Involvement.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0200 and selected 0100, 0300, 0400, 0800, 1300, and selected others; (b) other: Nominees should work in the regulatory functions program. However other Corps employees required to support regulators could benefit from this course. Only regulators can be assigned priority 1.

Session	Location	Date
2004-1	Huntsville, AL	10/27/2003 10/31/2003
2004-2	Annapolis, MD	04/19/2004 04/23/2004
2004-3	Seattle, WA	07/19/2004 07/23/2004

REGULATORY IIA

322 **35IIA01A**
Length: 36 Hours **Tuition: $1,080.00**

Purpose. This course provides an in-depth discussion of the procedural issues related to the more complicated laws, regulations, and policies which Corps regulators are called upon to enforce.

Description. The course covers scope of analysis, cumulative impacts, administrative appeals, historic properties, tribal issues, endangered species, essential fish habitat, and ocean/inland testing.

Prerequisites. Nominees must have attended the Regulatory I training course. Only regulators can be assigned priority 1. Other Corps employees required to support regulators, as well as people in other agencies having regulatory responsibilities, could benefit from this course.

TARGET AUDIENCE. Supervisors, project managers, enforcement officers, journeyman level regulators with a minimum of 2 years experience in grade level GS-07 and above.

Notes. All students attending Regulatory IIA or IIB training courses should have experience in the Corps Regulatory Program. A portion of each course will attempt to capitalize on student experiences by asking students to come prepared to discuss with the class their own regulatory experiences (case examples) which deal with one of the topics covered in the course. The case examples should be written (1 page single spaced) and turned in at the beginning of the class. Instructors may select these papers for duplication and distribution to the class. Students who do not submit papers will be required to discuss a case with the class.

Session	Location	Date
2004-1	Huntsville, AL	11/03/2003 11/07/2003
2004-2	Phoenix, AZ	05/17/2004 05/21/2004

REGULATORY IIB

323 **35IIB01A**
Length: 36 Hours **Tuition: $1,180.00**

Purpose. This course provides in-depth discussion of the more complex decisions that must be made throughout a permit evaluation, leading to a reasonable and timely final permit decision.

Description. The course covers business perspective, excavation rule, jurisdictional determination, exemptions, solid waste, general permits, wetland delineator program, wetlands management, mitigation, cumulative impacts assessments, alternatives analysis, 404(b)(1) guidelines, public interest review, and 404(q).

Prerequisites. Nominees must have attended the Regulatory I training course. Only regulators can be assigned priority 1. Other Corps employees required to support regulators, as well as people in other agencies having regulatory responsibilities, could benefit from this course.

TARGET AUDIENCE. Supervisors, project managers, enforcement officers, journeyman level regulators with a minimum of 2 years experience in grade level GS-07 and above.

Notes. All students attending Regulatory IIA or IIB training courses should have experience in the Corps Regulatory Program. A portion of each course will attempt to capitalize on student experiences by asking students to come prepared to discuss with the class their own regulatory experiences (case examples) which deal with one of the topics covered in the course. The case examples should be written (1 page single spaced) and turned in at the beginning of the class. Instructors may select these papers for duplication and distribution to the class. Students who do not submit papers will be required to discuss a case with the class.

Session	Location	Date
2004-1	Phoenix, AZ	02/09/2004 02/13/2004
2004-2	Virginia Beach, VA	06/14/2004 06/18/2004

REGULATORY III

325 **35GR301A**
Length: 32 Hours **Tuition: $1,090.00**
CEUs: 2.9 **PDHs: 29**

Purpose. This course prepares regulatory project managers for their role in enforcing the regulatory authorities provided by the Clean Water Act, Rivers and Harbors Act and the Marine Protection Research and Sanctuaries Act. It is also designed to prepare regulatory Program Managers for assigning and managing enforcement actions. This includes both unauthorized and compliance actions.

Description. This course covers statutory authorities, violations, enforcement and compliance, conducting investigations, collecting evidence, civil litigation, developing enforceable conditions and mitigation plans, criminal enforcement, civil and administrative penalties, as well as administrative resolution strategies and interagency cooperation. This course uses real world cases and exercises to translate regulatory laws, regulations and policies into practice. It prepares Counsel and Regulator alike for dealing with violators and U.S. Attorneys to ensure compliance with regulatory requirements and policies.

Prerequisites. All Corps Regulatory Project Managers, Program Managers, and Counsel, in grade level GS-07 through GM/GS-15 whose duties require them to evaluate and manage regulatory program actions.

Notes. A portion of each course will attempt to capitalize on student experiences by asking students to come prepared to discuss with the class one of their personal enforcement experiences or one of their districts enforcement experiences (case example). The case examples should be typed (1 page double spaced) and turned in at the beginning of the class.

Session	Location	Date	
2004-1	New Orleans, LA	02/09/2004	02/12/2004
2004-2	Oklahoma City, OK	06/21/2004	06/24/2004

REGULATORY IV

140 **35RG401A**
Length: 36 Hours **Tuition: $1,770.00**

Purpose. Regulatory IV is an interagency course in wetland delineation based on the current Federal Wetland delineation manual. It provides the student with a basic understanding of the interaction of vegetation, soils, and hydrology in wetlands in sufficient detail to apply delineation methods on routine cases. Upon completion, successful graduates will possess the background necessary to identify wetlands and determine their boundaries for purposes of administering programs such as the Section 404 Regulatory Program. Successful completion is determined by attendance and participation in all lecture, field, and laboratory sessions.

Description. Topics include (a) wetland characteristics (including soils, hydrology, and vegetation); (b) wetland delineation methods; and (c) field exercises in recognition of wetland boundaries.

Prerequisites. Agency personnel of the Corps, EPA, NRCS and FWS who are involved in the delineation of wetlands will be assigned Priority 1. Other federal, state, local and tribal entites and their agency employees can benefit from the course on a priority 2 and 3 basis. Appropriate field clothes are required.

Notes. This course contains requirements which are mandatory for course completion and may require an estimated 8 hours of overtime. It is your responsibility to bring this to the attention of your supervisor so that an overtime request can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

Session	Location	Date	
2004-1	Ft Collins, CO	06/28/2004	07/02/2004

REGULATORY V

137 **35RG501A**
Length: 36 Hours **Tuition: $1,870.00**

Purpose. Regulatory V is an interagency course designed for employees of federal agencies involved in assessing wetland functions in the field. The objective of the course will is to ensure students are as proficient as possible in applying regional subclass models and in evaluating their results. The course will focus on the application of models under different scenarios such as project impact assessment, alternative analysis, and mitigation design/monitoring associated with implementation of regulatory programs such as the Clean Water Act and the Food Securities Act. Successful completion of the course is determined by attendance and participation in all lecture, field, and laboratory sessions.

Description. Topics include overview of the Hydrogeomorphic Approach; developing Assessment Models and Regional Guidebooks; verifying, validating, and testing Assessment Models and Regional Guidebooks.

Prerequisites. Agency personnel of the Corps, EPA, NRCS, FWS, and FHWA who are involved in the evaluation of impacts associated with regulated or unauthorized activities in wetlands will be assigned Priority 1. Other Corps and outside agency employees can benefit from this course on a priority 2 or 3 basis. Appropriate field clothes are required.

Notes. This course contains requirements which are mandatory for course completion and may require an estimated 8 hours of overtime. It is your responsibility to bring this to the attention of your supervisor so that an overtime request can be made by your appropriate personnel. It is also your responsibility to certify the

amount of time expended on these requirements to your supervisor when you request overtime compensation.

Session	Location	Date
2004-1	Central	07/12/2004 07/16/2004

REGULATORY VII

436 **35RG701A**
Length: 24 Hours

Purpose. The Regulatory program changes rapidly. New Laws enacted by Congress have significant impact on the program. This workshop provides a regular forum to discuss and incorporate these changes into the program.

Description. Many of the topics to be covered in this course are covered in other Regulatory courses. However, senior regulators are not able to attend all of these courses. Topics are subject to change as Congress shifts it focus but could include: Flexibility in Regulatory, Regulatory Takings, Administrative Appeals, Tribal Issues and Responsibilities, Environmental Protection, or other Regulatory matters subject to the influence of Congressional action.

Prerequisites. Regulatory Chiefs, Branch Chiefs, Senior Regulatory Team Leaders, Chief of Operations, or those individuals responsible for maintaining a viable Regulatory program. Individuals should have a minimum of 5 years of experience in the Regulatory program at the Grade Level of GS-09 or above.

REMOTE SENSING-FUND

196 **35RSF01A**
Length: 38 Hours **Tuition: $1,590.00**

Purpose. This is a lecture-lab demonstration course designed to provide an understanding of the fundamentals of remote sensing technology as it is applied to environmental phenomena. The course stresses the basics of remote sensing, including information about the nature of light and optics, the classical properties of electromagnetic waves and their interaction with matter, and a review of radiation heat transfer. The working principles of primary remote sensors are discussed and include an overview of sensors and sensor platforms. An introduction to weather and earth resources satellites is included. Photogrammetry is not included in this course.

Description. The course is broken down into three parts: (a) the first part deals with energy and matter relationships: (1) concept of force fields, (2) geometrical optics, (3) properties of electromagnetic waves, (4) review of black body radiation laws, and (5) energy-matter interaction and atmospheric interaction; (b) the second part deals with the technical aspects of the primary sensors in operation: (1) electro-optical systems (nonphotographic), (2) radar imagers, (3) passive microwave imagers, (4) infrared, visible, and ultraviolet imagers, and (5) thermal scanners; and (c) the third part deals with the demonstration of data processing techniques, image interpretation, and techniques for optically enhancing, enlarging, and clarifying imagery. The demonstration of remote sensing applications covers: (1) land use, forestry, geography, geology, hydrology, meteorology, oceanography, etc.; (2) a general discussion with participants of COE mission areas for which remote sensing is relevant; and (3) discussion of entry of unprocessed and processed imagery into spatial data bases including a brief introduction to vector and raster concepts and conversion between them.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0400, 0800, and 1300; (b) Grade: GS-07 through 12. Nominees are, or will be, involved in the acquisition interpretation and application of remotely sensed data.

Session	Location	Date
2004-1	Hanover, NH	06/21/2004 06/25/2004

RESERVOIR MODELING W/HEC-RES

98 **35RSA01A**
Length: 36 Hours **Tuition: $1,960.00**

Purpose. This course provides participants with a capability to perform reservoir system studies using computer simulation optimization routines to analyze reservoir system performance.

Description. Reservoir simulation for flood control, water supply, hydropower and multipurpose operation is covered. The new computer program, Reservoir Evaluation System (HEC-Res) will be used for reservoir simulation problems. An introduction to system optimization for flood control and conservation studies will also be presented. In addition to reservoir simulation by computer, the course covers topics related to developing flow data and system demands, plus formulating and evaluating alternative reservoir system configuration and operations strategies.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0800 and 1300; (b) Grade: GS-07 or above. A basic level of understanding is required in hydrology, hydraulics, and reservoir regulation. Three or more years of professional work experience in hydraulics and hydrology or in water resources planning with emphasis in hydrologic and hydraulic studies, meets this level of understanding. In addition, it is required that course participants be in positions where they will be involved in reservoir system studies within the next year or two.

Session	Location	Date
2004-1	Davis, CA	08/23/2004 08/27/2004

RIPARIAN ECOL/MGT

281 **33REM01A**
Length: 36 Hours **Tuition: $2,430.00**

Purpose. This course addresses planning and management issues that pertain to riparian (streamside) ecosystems in a variety of ecological and geographical settings. Emphasis is placed on the ecology, restoration and stewardship of riparian habitats associated with Civil Works projects and activities. Students will receive instruction on the functions and ecological importance of riparian zones, conservation needs, potential impacts resulting from various land use practices, and restoration and management techniques that can be applied to maintain or improve riparian systems.

Description. Through a series of lectures, practical exercises, and field activities, students will be introduced to the following topics: (a) riparian classification (including regional variation); (b) riparian functions, values, and trends; (c) riparian ecology (fluvial geomorphology, vegetation, fauna; will include sessions on aquatic biology, threatened and endangered species, and the importance of riparian zones to neotropical migrant birds); (d) inventory and monitoring techniques; (e) impacts (hydrologic changes, vegetation modification, exotic species, agricultural practices, bank erosion, non-point source pollution); (f) restoration methods; and (g) management strategies (including development of appropriate designs for corridors and buffer strips). Field trips will be taken to several locations to examine riparian habitats and demonstrate inventory, restoration, and management techniques. Case studies will be presented on riparian issues at Civil Works projects and military installations.

SUBJECTS AND LEARNING OBJECTIVES. Students will be able to characterize riparian habitats, understand the functions and values of these habitats, and make the most appropriate decisions regarding their restoration, use, conservation, and management from an ecosystem perspective. Students will be taught state-of-the-science techniques and procedures for collecting, analyzing, and displaying ecological data needed to understand and manage riparian systems. Applicable laws, regulations, and agency policies will be reviewed. Students will be able to identify specific techniques and procedures for inventorying, assessing, analyzing, and evaluating the status of riparian resources and associated impacts upon these resources.

Prerequisites. Nominee assignments should be: (a) primarily technical personnel whose duties involve the identification, evaluation, analysis, protection or management of ecological resources. Project and Program Managers responsible for project and program management activities, particularly those involving ecosystem restoration, would also benefit; (b) Occupational series: 0020's, 0150, 0185, 0190, 0198, 0400's, 0800's, 1023, 1350 to include physical scientists, environmental protection specialists, and hydrauligists; and (c) Grade: GS-09 or above. Disciplines (other than the above) may be accepted provided nominee's present or anticipated duties involve the management, analysis, identification, protection, or evaluation of ecological/natural resources.

SPECIAL INSTRUCTIONS. This course involves hands-on field exercises. Therefore, students should prepare to work in riparian and aquatic environments and should bring appropriate shoes and clothing.

NOTE. This course contains requirements that are mandatory for course completion and may require an estimated 8 hours of overtime. It is your responsibility to bring this to the attention of your supervisor so that overtime request/determination can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

Session	Location	Date	
2004-1	Anchorage, AK	07/19/2004	07/23/2004

RISK ANALYSIS-WRP&M

349 **35RAW01A**
Length: 36 Hours **Tuition: $1,380.00**
CEUs: 3.1

Purpose. This course introduces concepts of risk analysis into Corps of Engineers planning studies and extends these concepts to studies for structural rehabilitation and for management and operations of existing projects. Risk analysis is an evaluation framework, joined with benefit-cost analysis, to formally introduce mechanisms for evaluating alternative solutions under conditions of risk and uncertainty (R&U). Many techniques are already in use by Corps analysts, but are not applied in systematic and uniform manner. New methods and analytical models have been developed, along with a body of information on risk perception and communication that will also be transferred to practice.

Description. Risk analysis is an integral component of Corps of Engineers planning, much as benefit-cost analysis is. It affects all technical analysis throughout each step of the planning process. For example, risk perception and communication is an important element of the scoping process. Environmental analysis, hydrologic analysis, and benefit-cost analysis all require a components of R&U analysis.

In addition, risk-based analysis concepts are being adopted or proposed for use in operations and maintenance; particularly, the evaluation of major rehabilitation and dredging.

Major risk analysis in planning and management topics to be included in this course are (a) concepts, (b) probability and statistics; (c) models for risk analysis; (d) hydrologic and hydraulic risk; (e) risk and reliability in rehabilitation analysis of hydraulic structures; (f) risk

in planning and management of maintenance dredging; (g) forecasting uncertainty; (h) benefit-cost uncertainty; and (i) case studies for flood control and navigation planning.

OBJECTIVES. Upon successful completion of this training, attendees will be able to (a) identify uses of risk and uncertainty analysis in the six steps of water resources planning; (b) list the difference between risk analysis and uncertainty analysis; (c) identify at least four probability distributions applicable to risk and uncertainty analysis; (d) calculate sample statistics and confidence limits; (e) identify at least three areas of risk common to water resources planning; (f) list at least two computer models useful for estimating and analyzing simulations; (g) describe when to use probabilistic decision analysis methods; (h) describe the difference between risk assessment and risk management and the planner's role; (i) list at least four guidelines to remember to improve risk communication; (j) list at least three key critical risk and uncertainty components typically encountered in a flood control project evaluation; (k) list at least three key critical risk and uncertainty components typically encountered in a navigation project evaluation; (l) work through the application of risk-based benefit-cost analysis for evaluation of major rehabilitation alternatives; (m) describe the use of engineering models in risk-based analysis of planning and management of maintenance dredging; (n) work through the application of risk and uncertainty techniques to a flood control case study; and (o) work through the application of risk and uncertainty techniques to a navigation case study.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0020, 0340, 0110, 0801, 1300; (b) Grade: GS-07 through GS-13. This course is designed for planners and engineers. However, other personnel (project managers, operations, regulatory, recreation, etc.) will find it useful in terms of broadly applicable principles, concepts, and analytical tools.

Session	Location	Date	
2004-1	Springfield, VA	05/17/2004	05/21/2004

RISK CONCEPTS AND MANAGEMENT

704 **46RCM01A**
Length: 12 Hours **Tuition: $400.00**

Purpose. The Professional Development Support Center (PDSC) is partnering with the University of Alabama in Huntsville (UAH) to offer you the Project Management Certificate Program. This program consists of seven core courses which make up two tracks of study. The first six courses make up Track One which is a general overview of the Project Management knowledge and skills areas. You can take one, two, or all of these courses depending on your individual needs.

Track Two consists of the PMP Examination Review and is intended to prepare Project Managers for the Project Management Professional Examination offered by the Project Management Institute (PMI). The PMI awards Project Management Certification for the successful completion of the Project Management Professional Certification Examination.

The UAH Professional Development Project Management Certificate Program certificate is awarded after the successful completion of the seven core courses.

These courses will be taught via the PDSC Video Teleconferencing System. They will originate at PDSC and be broadcast to your respective site.

Description. Project managers are critically examining their approach to managing risk. To remain competitive, projects cannot afford to set up contingencies or control measures for every conceivable risk. Risk Concepts and Management teaches the initial process for recognizing strategies for significantly reducing or eliminating project risk by using proactive risk management. During the planning process you will analyze projects to identify and assess work elements into a workable scheme to accomplish the project. Learn to use uncertainty analysis and decision trees, network analysis, and sensitivity analysis. Learn the process for closing the project risk management plan and bringing it to an orderly end. This course exposes you to the latest analytical tools in quantitative decision analysis and demonstrates how these techniques are applied in the risk management process.

RISK-BASED ANALYSIS

209 **33RBA01A**
Length: 36 Hours **Tuition: $2,040.00**
CEUs: 2.6 **PDHs: 26**

Purpose. This course introduces Corps of Engineers field office staff to risk-based analysis for flood damage reduction projects. Participants will know the methodologies for determining uncertainty in discharge, stage, and damage and how to evaluate project size and performance accounting for the uncertainty in these parameters. Project function, safety, and workability are reviewed to increase awareness of how these issues affect the formulation of project features.

Description. The course presents current policy and technical procedures for conducting risk-based analysis of typical flood damage reduction projects such as levees, channels, and reservoirs. Included are lectures and case studies describing procedures for determining uncertainty in discharge-frequency, stage-discharge, and stage-damage relationships for various project site characteristics. Procedures for conducting Monte Carlo simulations for evaluating project reliability and size are described using current software developed for the personal computer. Concepts and procedures are demonstrated and practiced in classroom workshops. Current Corps policy related to risk-based analysis is also discussed. Project function focuses on typical features associated with riverine flood reduction projects. Performance evaluation includes setting levee grade,

closure and overtopping strategies, and local operation, maintenance, rehabilitation, replacement, and repair task evaluation. Requirements for interior flood analysis are also presented. Examples and case studies illustrate potential problems and solutions.

Prerequisites. Nominees for the course should have experience in the hydrologic, hydraulic, economic, or plan formulation aspects of flood damage reduction projects. Managerial and supervisory personnel are encouraged to attend. Nominees must be assigned (a) Occupational Series: Selected 0000-0100, 0800, and 1300; (b) Grade: GS-09 or above. Nominees should have a basic understanding of concepts, terms, and analysis as presented in Hydrologic Engineering in Planning (057).

Session	Location	Date
2004-1	Davis, CA	02/09/2004 02/13/2004

ROLLER COMP CONCRETE

749 **35ERC01A**
Length: 16 Hours
Video Run Time: 2 Hours **Tuition: $1,000.00**

* This course is divided into two sections: one for mass and one for pavements. Each section has a video run time of approximately 1 hour each. Training credit of 16 hours should be given for each section.

Purpose. This course provides detailed information on the placement and verification of roller compacted concrete. Roller compacted concrete (RCC) is becoming very popular within the Corps of Engineers due to its economic and fast construction factors. This course provides the knowledge for the new technique.

Description. This course covers both RCC mass and RCC pavements. RCC mass is discussed in Modules 1-5. RCC pavement is discussed in Modules 6-10. Each section's video run time is approximately 1 hour each.

MASS-Modules: (1) QA Duties and Responsibilities; (2) Materials, Preparation, Test Section and Sampling and Testing; (3) Concrete Plant and Execution; (4) Design and Construction Considerations; and (5) Special Considerations.

PAVEMENTS - Modules: (6) QA Duties and Responsibilities; (7) Materials, Preparation, Test Section and Sampling and Testing; (8) Measuring, Mixing, and Transportation; (9) Joints; and (10) Weather and Safety.

Prerequisites. Nominees should be personnel who are interested in expanding their knowledge of roller compacted concrete placement, especially construction quality assurance personnel, engineering specifiers, and those responsible for maintenance, such as DEH personnel. Students should have completed the Construction Quality Management (classroom or exportable) course.

ROOFING TECHNOL

744 **73RTA01A**
Length: 24 Hours
Video Run Time: 1.7 Hours **LUs: 24**

Purpose. This course provides an overview on all low-slope roofing systems. Students are presented a broad spectrum of both theoretical and practical aspects of design, specifications materials selection and compatibility, application workmanship, maintenance, repair, and quality assurance for various roofing systems.

Description. Training materials include one 1/2" videotape cassette, a Facilitator's Guide, and a Student Study Guide. Training is designed to be accomplished in 3 full days.

MODULES. The topics covered in this course are (a) Overview; (b) Structural Decks; (c) Roofing Drainage; (d) Vapor Retarders; (e) Insulation; (f) Built-Up Roofing; (g) Flashing; (h) Metal Roofs; (i) Protected Membranes; (j) Shingles; (k) Single-Ply Systems; (l) Forensic Problems; (m) Construction Conferences; (n) Construction Inspection; (o) General Maintenance Procedures; (p) Single-Ply Maintenance; (q) Maintenance of Built-Up Roofs; (r) Nondestructive Moisture Surveys; and (s) Factory Mutual and the Underwriters' Laboratory.

Prerequisites. This course is designed for personnel who are interested in expanding their knowledge of roofing systems, especially Construction Quality Assurance personnel, architects, engineers, specifiers, and persons responsible for maintenance. Students should have completed the Construction Quality Management (classroom or exportable) course.

RW MANIFES/DOT RECERT

430
Length: 16 Hours **Tuition: $630.00**

Purpose. This 16-hour course provides recurrent training regarding the regulatory requirements of the Hazardous Materials Transportation Act (HMTA) and the Resource Conservation and Recovery Act (RCRA) as it applies to the generation, transportation and disposal of hazardous waste and Class 7 and 9 radionuclides. It enables employers to certify as required in 49 CFR 172 Subpart H, that their employees have been trained and tested in general awareness and function-specific elements as described below. In addition, this is a DoD approved course as per DoD 4500.9-R, Oct 99. (Note: Certain RCRA and safety related training elements required by 49 CFR 172 Subpart H and 40 CFR 265.16 are typically site-specific and must be performed on the job.)

Description. Training topics cover the identification and classification of hazardous wastes for purposes of preparing a hazardous waste manifest and fulfilling the DOT requirements for shipping hazardous wastes and

radioactively contaminated wastes. Specifically, training topics include RCRA waste classification, land disposal restrictions and notification, manifesting requirements, identification of a DOT Reportable Quantity, use of the Hazardous Materials Table, DOT requirements for determining a shipping name, properly packaging, labeling, marking and placarding, and DOT emergency response requirements. In addition, the course addresses special EPA and DOT requirements for shipping asbestos and PCBs, and the specific DOT requirements associated with shipping Class 7 materials. (A scientific calculator must be brought to class.)

Prerequisites. This course is primarily targeted at persons in the following series: 0820, 0809, 0810, 0819, 0028, 0029, 0025, 0026, 0401, 1350, 1301, 0893, 0830, 1306, and 1320. (All series involved with environmental programs, including all engineers, chemists, industrial hygienists, health physicists, biologists, geologists, hydrogeologists, program managers, planners, etc.) The training is designated for persons with any of the following job responsibilities: identification of proper shipping names for hazardous and/or radioactive wastes in accordance with DOT regulations; selection of appropriate packagings, markings, labels and placards in accordance with DOT regulations; RCRA waste identification and classification; completion or review of hazardous waste manifests and/or land disposal restriction notifications; preparation of shipping documents for radioactive waste, used oil, asbestos and PCBs; shipping of analytical samples; loading or unloading of radioactive or hazardous wastes; and transportation of hazardous materials in general.

Session	Location	Date	
2004-1	Huntsville, AL	02/24/2004	02/25/2004
2004-2	Virginia Beach, VA	06/30/2004	07/01/2004

S&H FOR HWS EXP 8-HR

766 **58SHR01A**
Length: 8 Hours
Video Run Time: 1.5 Hours **Tuition: $225.00**

This course provides participants with 8-hour safety and health refresher training as specified by the U.S. Occupational Safety and Health Administration's 29 CFR 1910.120 requirements.

Purpose. The course is designed for USACE team members involved in uncontrolled hazardous, toxic waste site operations under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the Resource Conservation and Recovery Act (RCRA), Remedial Actions and the Defense Environmental Restoration Program (DERP) of Formerly Used Defense Sites (FUDS), and the Installation Restoration Program (IRP).

Description. Training materials include 1/2" videotape cassettes, a Facilitator's Guide, and a Student Study Guide. In accordance with OSHA, course topics include names of personnel and alternates responsible for site safety and health; safety and health hazards present on the site; use of personal protective equipment; work practices to minimize risks from hazards; medical surveillance requirements, safety and health programs; site-specific plans; decontamination procedures; emergency response plans; confined space entry procedures; and spill containment.

Prerequisites. (a) An initial 40-hour Safety and Health for Hazardous Waste Sites Course or other qualifying 40-hour safety and health course for uncontrolled hazardous waste sites meeting OSHA requirements 29 CFR 1910.120 and 29 CFR 1910.121. (b) Nominees should be team members directly involved in hazardous waste operations and management. (c) Persons responsible for the safety and health of Corps team members should have a degree in science or engineering and/or equivalent amount of relevant practical experience. (d) The course facilitator must have completed the Facilitator Training course.

SA/DBA TRAINING COURSE

970 **54SAD01A**
Length: 32 Hours **Tuition: $650.00**

Purpose. The purpose of this course is for "Technical Support, Functional Support and technical and Functional Issues".

Description. This course will teach "Discover tool-how to load, setup and use it; DPAS interface - what does SA.DBA need to know about interface; Security issues (firewalls), how to identify problems and correct problems before they occur". There will be a overview of functions and how they tie together. TOPICS: Basic Ops System; Database Engineer; Network Principles, Security, Procedures; Troublshooting Techniques (Detailed SA Training); WEB Base Technology and File Management.

Prerequisites. Nominees should be Systems Administrators and Data Base Administrators. Take Prerequisites: http://www.armycbt.army.mil Oracle8i Database Administration courses: 1Z0-023, IZ0-024, 1Z0-025, 1Z0-026.

SAFE SELF

708
Length: 4 Hours
CD-ROM & Web-Based: Self-paced **Tuition: N/C**

Purpose. This course will help Corps employees learn about tactical communications and conflict resolution. This course will help meet the annual tactical communication training requirements for Corps park rangers.

Description. This course is an interactive course that uses both web-based and CD-ROM technology to assist park rangers and other Corps personnel who meet the public daily. It is based on the concepts and techniques used in the internationally recognized com-

munications-training program "Verbal Judo", developed by Dr. George Thompson and the Verbal Judo Institute. The course consists of the following scenarios: Disruption of a Ranger Demonstration, Reservation Not on File, Campers Violating Quiet Hours. Visitor Confronts Office Assistant, Visitor Parked on Grass, Emergency Call Received by Volunteer, and Female Ranger accosted by Visitor.

Prerequisites. Park rangers and other Corps personnel who meet the public daily.

SAFETY/HEALTH-HWS

351 **58SHH01A**
Length: 40 Hours

Purpose. This course is designed for personnel involved in hazardous waste site and emergency operations and management. This includes, but is not limited to, Superfund (SF), Formerly Utilized Sites Remedial Action Program (FUSRAP),Resource Conservation and Recovery Act (RCRA), Underground Storage Tank (UST) activities, and the Defense Environmental Restoration Program (DERP). The latter includes both the Installation Restoration Program (IRP) and Formerly Used Defense Sites (FUDS) Program.

This course satisfies the requirements mandated by Congress in the Superfund Amendments and Reauthorization Act of 1986 (29 CFR 1910.120 (E), 40 hours off-site.

Description. Through lectures, hands-on practical exercises, and examinations, the student will learn to conduct work activities relative to hazardous waste site operation, design criteria, site screening, and a working knowledge of all relevant environmental and occupational safety and health laws/regulations such as, but not limited to, the Occupational Safety and Health Agency (OSHA) Hazardous Waste Operations and Emergency Response Regulations, CERCLA, and RCRA. Specific topics taught include (a) Scope, application, and definitions of hazardous waste operations and emergency response; (b) safety and health programs; (c) site characterization and analysis; (d) site control; (e) training; (f) medical surveillance; (g) engineering controls, work practices, and personal protective equipment for employee protection; (h) monitoring; (i) informational programs; (j) handling drums and containers; (k) decontamination; (l) emergency response by employees at uncontrolled hazardous waste sites; (m) illumination; (n) sanitation at temporary workplaces; (o) new technology programs; (p) certain operations conducted under the Resource Conservation and Recovery Act of 1976 (RCRA); and (q) emergency response to hazardous substance releases by employees.

SPECIAL REQUIREMENTS FOR SUCCESSFUL COMPLETION OF COURSE. This course consists of an intense 40 hours of instruction and requires extensive physical exertion. Personnel must have been medically evaluated within the past year by a licensed physician and determined to be physically able to perform the rigors of all required hands-on training and qualified to wear a respirator while wearing Level A, Level B, and Level C protective equipment. Personnel will wear half-face and full-face piece negative pressure air purifying respirators. Medical qualification meeting the requirements of OSHA Title 29 CFR Part 1910.134, Respiratory Protection, shall be met, and documentation of this qualification must be presented to the course instructor. Personnel with any medical limitations that will prevent them from completing all hands-on training shall not take this course. Personnel will not be allowed to wear respiratory protective equipment where facial hair comes between the face-piece to face seal or that otherwise may interfere with the valve function of the respirator. This does not exclude all facial hair. For example, closely cropped moustaches and trimmed sideburns are acceptable. Individuals shall conform to this facial hair policy during respirator use. Personnel not meeting this requirement shall not be issued a course completion certificate. Personnel are required to wear personal protective equipment under simulated work conditions and must perform all exercises to receive 40-hour certification.

Prerequisites. Nominees should (a) be directly involved in hazardous waste site and emergency operations and management including, but not limited to, quality assurance, Corps drill and survey crews, geologists, Preliminary Assessment/Site Investigation (PA/SI) team members, emergency responders, and safety and health; (b) have a degree in engineering or a scientific discipline or have practical experience in hazardous waste site operations; and (c) have completed all requirements listed under the SPECIAL REQUIREMENTS paragraph above before arriving at the course site.

Personnel with any medical limitations that will prevent them from completing all hands-on training shall not take this course.

SEAGRASS MIT/ECOL WS

424 **33SME01A**
Length: 32 Hours **Tuition: $2,460.00**

Purpose. To identify state-of-the science seagrass ecology and mitigation alternatives (restoration, enhancement, avoidance, minimization and development) through a series of lectures, practical field problem solving with field trips and highly facilitated discussions involving known experts in the field.

Description. This National workshop will focus on "lessons learned" approach to seagrass mitigation based upon linking the latest seagrass science/ecology to formulating mitigation alternatives from a project and program management perspective. Recent changes in the consideration of the avoidance approach to seagrass mitigation alternatives formulation and analysis based on the best available science and technology has re-

sulted in new and innovative approaches to seagrass mitigation based upon National and regional perspectives (SEUSA and Western USA). Past and present peer and non-peer reviewed seagrass literature will be examined. Participants of the workshop will meet the known seagrass mitigation experts in highly facilitated lecture and field problem solving exercises. Case studies of successful and innovative seagrass mitigation work will be examined for application to the Pacific Northwest seagrass mitigation opportunities and challenges.

Prerequisites. Project or program management from planning, design, engineering, regulatory, navigation and environmental resources. Disciplines (other than the above) may be accepted provided the nominee's present or anticipated duties involve the management, plan formulation, alternatives identification and analysis or regulation or seagrass resources.

Special Instructions: This is a field workshop which will involve "hand on" field exercises. Students should come prepared to work in the marine (salt water environment) and bring appropriate clothing, shoes and boots.

Session	Location	Date
2004-1	Juneau, AK	08/02/2004 08/05/2004

SECURITY ENGINEERING

958

Purpose. To provide a basic understanding of security engineering principles so that security and engineering personnel can work together more effectively to address security and antiterrorism/force protection issues at the inception of a construction project for new or upgraded facilities.

Description. This course covers the information contained in Technical Manual (TM) 5-853-1/AFMAN 32-1071, Volume 1, "Security Engineering - Project Development" and TM 5-853-2/AFMAN 32-1071, Volume 2, "Security Engineering - Concept Design." These TMs are an updated and expanded version of the "Security Engineering Manual" (January 1990), published by the U.S. Army Corps of Engineers Protective Design Mandatory Center of Expertise. These manuals present a process by which a planning team consisting of provost marshal, engineer, and other appropriate personnel, along with the ultimate facility user, can formulate security-related design criteria for a facility. The design criteria consist of the assets to be protected, the threat to those assets in terms of specific aggressor tactics, the degree to which the asset will be protected against the threat, and any user-imposed design constraints. The manuals further provide a process by which protective measures to counter the threats to assets can be determined and integrated into a total protective system. They also provide a means to estimate a preliminary cost for the system. The course consists of formal instructional periods in applying the manual with interspersed sample problem exercises. The course also includes a comprehensive practical problem solved and presented by students divided into interdisciplinary groups. In addition, the course provides information on how risk analysis and regulatory requirements for physical security and antiterrorism/force protection are incorporated into facility planning.

PERFORMANCE OBJECTIVE: Students will learn the concepts and philosophies of security engineering. Engineers and security personnel will gain a better understanding of their different needs and approaches. This understanding will enable them to work together more effectively to address security problems. Students should be able to apply the concepts and philosophies of security engineering sufficiently to put together preliminary solutions to real security problems and work as partners on an interdisciplinary planning team.

Prerequisites. Civilian and military (commissioned officer, warrant officer, and enlisted) personnel involved in security or engineering support of security. Security personnel may include people from provost marshal or other security and law enforcement offices, especially those personnel involved in physical security. Engineer personnel may include planners and designers from Corps of Engineers offices and Directorates of Public Works. In addition, emergency management personnel and those responsible for key asset protection will benefit from this course. Personnel from installation level, major command level, and Corps of Engineers district and division levels are encouraged to attend. Representatives from other government agencies may also attend.

PLEASE NOTE: The Security Engineering Course is presented by the Protective Design Center located in Omaha, Nebraska. For course dates and locations, or for more information regarding the Security Engineering Course, please contact Ms. Katherine Barnett by e-mail at katherine.d.barnett@usace.army.mil, or by phone at (402) 221-4919.

SEDIMENT TRANSPORT

122 **35SDT01A**
Length: 36 Hours

Purpose. This course reviews the principles of open channel hydraulics and provides information on channel aggradation and degradation, sediment transport, and use of numerical models to predict stream behavior.

Description. The course prepares engineers to perform moveable boundary hydraulic studies using the computer program HEC-6 "Scour and Deposition in Rivers and Reservoirs." Topics include sediment characteristics and data gathering, sediment transport theories and equations, stream bed armoring, use and calibration of HEC-6 for prediction of stream bed profile changes, reservoir deposition, and maintenance dredging.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0800 and 1300; (b) Grade: GS-09 or above. The student should have a working knowledge of open channel hydraulics, particularly step-backwater calculations. Familiarity with HEC-2 input structure and format is also required. In addition, course participants must be in positions or anticipate being in positions where they will be involved in sediment studies within the next year or two.

SEEPAGE AND PIPING

250 **35SEP01A**
Length: 36 Hours **Tuition: $2,480.00**

Purpose. This course trains Corps of Engineers designers and field engineers for seepage analysis, control, field problems in dams, levees, retaining walls, and slopes. This course is for both young and experienced engineers. The course uses criteria in EM 1110-2-1901 and TM 5-818-5, supplemented by field experience.

Description. The course will cover the principles of seepage through soils, related problems with erosion and piping, and methods for preventing and mitigating these problems. Specific topics will include Darcy's law, permeability of soils, flow nets free surface problems, erosion and piping, filter criteria and remedial measures, and use of computer programs for design and analysis.

Prerequisites. Nominees must be assigned: (a) Occupational Series: Selected 0800; (b) Grade: GS-07 or above; and (c) Others: Employed as soils engineer, geologist, construction engineers, or operation and maintenance engineers.

Session	Location	Date	
2004-1	Huntsville, AL	03/16/2004	03/18/2004

SEISMIC DESIGN BLDGS

27 **35SDB01A**
Length: 36 Hours **Tuition: $2,250.00**

Purpose. This course trains structural engineers who are not thoroughly familiar with seismic design. Seismic design technology and design procedures have advanced dramatically in recent years. The Corps seismic manuals have been rewritten to reflect these criteia. Unless our designers are trained in the new design they could be designing building that do not meet the new codes and standards. The Corps designs Army buidings that must meet the latest codes. At this time, the Corps manuals are the most updated materials available.

Description. Through lectures and testing, this course presents (a) introduction of seismic design; (b) seismic design criteria; (c) seismic design procedures; (d) structural elements of (including illustrative examples): (1) diaphragms, (2) walls, (3) frames, (4) masonry, (5) mechanical, electrical, and architectural elements, (6) utility systems; and (e) a one-half day field trip to a construction site/seismically designed building (if practicable). Students will be able to design/review seismic design analyses and drawings more efficiently upon completing this course. The manuals to be used are,TI 809-04, "Seismic Design for Buildings", TI 809-05, "Seismic

Evaluation and Rehabilitation for Buildings" Corps Specifications addressing certain aspects of seismic issues and national codes and guidance referenced in the Corps documents.

Prerequisites. Nominees must be assigned and/or have all of the following: (a) Occupational Series: 0810 and 0830. Waivers must be submitted for other occupational series; (b) Grade: GS-07 or above. Course is open to Air Force and Navy personnel.

Session	Location	Date	
2004-1	Champaign, IL	07/12/2004	07/16/2004

SEISMIC STABILITY

247 **35SSE01A**
Length: 36 Hours

Purpose. This course provides Corps of Engineers personnel with the knowledge, skills, and abilities needed for assessing the seismic safety of the Corps dams and other earth structures with state-of-the-art analytical tools and procedures.

Description. Through a series of lectures, case studies, and laboratory demonstrations, students will introduced to the following topics: (a) earthquake ground motions; (b) site characterization; (c) site response analysis; (d) liquefaction evaluation; (e) slope stability and deformation; and (f) remediation alternatives.

Prerequisites. Nominees must be assigned: (a) Occupational series: 0810; and (b) Grade GS-09 and above.

SHEAR STRENGTH

248 **35SHS01A**
Length: 24 Hours

Purpose. This course provides geotechnical engineers with the background and knowledge of shear strengths required in stability analysis of embankment dams, levees, and slopes in open cuts or natural ground. Participants completing this course will be well prepared to select appropriate design shear strengths for various cases for which stability analyses shall be performed. This course compliments and enhances the training in dam safety.

Description. The course provides instruction in the following topics: (a) Shear strengths, concepts, failure envelopes, and failure criteria; (b) Shear strengths of cohesionless soils; (c) Shear strengths of cohesive soils: (1) Types of shear strengths (Q,R,R-bar, S strengths, and anisotropically consolidated shear strengths), test procedures, and plotting results; (2) Stress paths and interpretation; (3) Factors affecting

tests and strengths; (d) Undrained strength tests and interpretation; and (e) Methods and cases of Corps slope stability analysis and related matters.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0800; and (b) Grade: GS-07 or above.

SLOPE STABILITY ANALYSIS

282 **35SSA01A**
Length: 36 Hours **Tuition: $1,870.00**

Purpose. The course provides current information and analysis procedures contained in the Corps newly updated EM 1110-2-1902 which is to be published in FY02. The lecture emphasizes on the two procedures for the sudden drawdown case; the old Corps procedure and the Duncan-Wright procedure. The lecture is intended for design engineers, technical specialists, and independent technical reviewers involved in all aspects of the slope stability.

Description. In addition to using a computer program, a hand calculation will also be used to illustrate the analysis procedures in details. The course covers the following topics: (a) Review of soil shear strengths; (b) Slope stability theories and various analysis procedures; (c) Design conditions and design criteria; (d) Analysis procedures for sudden drawdown case using the Duncan-Wright procedure and the old Corps procedure.

Prerequisites. Civil engineers, GS-7 and above. Nominees should have a pre-knowledge of shear strength of soils.

Session	Location	Date
2004-1	Blacksburg, VA	05/10/2004 05/14/2004

SOIL STRUC INTERACT

113 **35SSI01A**
Length: 36 Hours **Tuition: $2,400.00**

Purpose. This course trains Corps of Engineers civil engineers to use soil structure interaction analyses for strip footings, mat foundations, single piles, sheet pile walls, and reinforced concrete structures.

Description. The course covers the fundamentals of soil-structure interaction (SSI) analyses and their application to Corps-type problems. Finite difference and finite element computer programs available for the soil-structure interaction analysis are explained. Both 1-D and 2-D problems are covered. Examples of Corps-type problems are solved using SSI techniques. Workshop sessions provide the participants an opportunity to use computer programs that utilize SSI techniques. The new PC based SSI computer program will be demonstrated. After completing this course students will be able to complete difficult designs using computer solutions to soil structure displacement problems.

Prerequisites. Nominee must be assigned (a) Occupational Series: Selected 0800; (b) Grade: GS-07 or above. Nominees should be engineers involved in the design of structures and should have some experience in the use of personal computers.

Session	Location	Date
2004-1	Vicksburg, MS	03/22/2004 03/26/2004

SPACE UTILIZATION

214 **49SUM01A**
Length: 36 Hours **Tuition: $850**
LUs: 30

Purpose. This course is designed for space utilization, master planning, real property management, and facilities management personnel. The course was developed to provide these personnel with the basic tenets of space utilization management within the U.S. Army. This course has two focuses: (1) to train managers, at all levels how to determine organizational space allowances nd requirements, and to plan and conduct utilization surveys; and (2) to identify ways to increase efficiency through space planning techniques.

Description. This course includes lectures, discussions, and exercises, which teach students to recognize poorly used or planned facility and to make necessary adjustments. Space utilization will be adjusted through space allowance and requirements analysis of organizations and facilities on the installation. The second half of the course concentrates on improving space utilization by using space-planning techniques and by the use of systems furniture. Major topics include (a) Army facility asset database overview, (b) organizational space allowances and requirements, (c) planning and conducting a space utilization survey, (d) space planning principles, and (e) qualitative elements of space planning. The principal underlying directive for this course is Army Regulation 405-70, Utilization of Real Property.

Prerequisites. This course is open to all civilian and military personnel employed by the US Government. Contractor personnel may be accommodated with special permission. Nominees must be assigned in Civilian Occupational Series: 0301; 0303, 0322, 1343, 0344, 0801, 0802, 1101, 1170, 1173; Grade: GS-05 or above. Military personnel equivalents should be used to determine eligibility. Students should have worked one year or more in a position dealing with the assignment of space on an installation/major facility or the assignment of organization to an installation/major facility. Students should bring a hand-held calculator to the course.

Session	Location	Date
2004-1	Huntsville, AL	05/03/2004 05/07/2004
2004-2	Huntsville, AL	06/21/2004 06/25/2004

SPECS - CONSTR CONTR

185 **35SWC01A**
Length: 36 Hours **Tuition: $880.00**
LUs: 34

Purpose. This course provides instruction for preparing effective specifications for construction projects. The course is designed for engineers, architects, and technicians involved in the preparation of project specifications. The course covers principles of specification writing, procedures and techniques for writing specifications, and relationships of specifications to other elements of the contract documents. This course is strongly recommended for all design and supervisory personnel involved in development of project specifications.

Description. Major subject matter topics include (a) language of specifications/written communication; (b) organization and format of specifications; (c) sources of technical information; (d) procedures, techniques, and methods of specification development; (e) guide specifications and project developed specifications; (f) contract clauses and contract interpretation; (g) relationship of contract drawings to specifications; (h) automated specification methods; and (i) regulatory and ethical considerations.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0800; (b) Grade: GS-09 through GS-13. Students should have current or projected assignments related to project specifications.

Session	Location	Date	
2004-1	Huntsville, AL	04/26/2004	04/30/2004
2004-2	Virginia Beach, VA	07/19/2004	07/23/2004

SQL FOR IFS

975/CECPW **54SD101A**
Length: 32 Hours **Tuition: $800.00**

Purpose. This course is designed for Directorate of Public Works (DPW) personnel to gain hands-on development of SQL queries. The SQL For IFS course explains how the Integrated Facilities System (IFS) Help can assist in developing queries, and will reinforce the students understanding of using basic SQL commands to query the database moving to the more advanced commands to create legible reports from queries.

Description. This course applies techniques learned in the Army e-Learning/Web Based training courses to the IFS database (create, edit, execute and save queries, select info from multiple oracle data tables, how to use join, unions, and views). Students will learn how to improve query optimization, and will learn the IFS database structure and modules.

Prerequisites. e-Learning course: 1Z0-024 to understand concept of relational database and know basic SQL commands/oracle syntax. Have a working knowledge of IFS Screens. Website: https://www.atrrs.army.mil/channels/eLearning/smartforce/

Target Audience**:** All DPW personnel requiring training using SQL to query the IFS database. This is a course for DPW Installation Personnel.

Session	Location	Dates	
2004-01	Huntsville, AL	01/26/2004	01/29/2004
2004-02	Huntsville, AL	07/12/2004	07/15/2004

STAT METHODS WATER

58 **35SMH01A**
Length: 36 Hours

Purpose. For participants to become knowledgeable in application of statistical methods that are useful in the analysis of flood damage reduction, environmental and water supply systems. Methods include advanced theory of frequency analysis, distribution fitting and testing, univariate and multivariate regression analysis, and regional analysis.

Description. Topics covered include (a) distribution fitting and testing; (b) mixed population frequency analysis; (c) regulated flood frequency analysis; (d) regional frequency analysis; (e) application of univariate and multivariate regression methods for regional analysis; and (f) time-series analysis.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0800, 1300, and 1500; (b) Grade: GS-09 or above. Students should have already taken HEC Flood Frequency Analysis course or equivalent.

STEADY FLOW HEC-RAS

114 **35BH201A**
Length: 36 Hours

Purpose. This course teaches the concepts of open channel flow, data requirements. HEC-RAS input requirements, application of bridge and culvert routines, channel modification analysis, floodway determination, and output analysis. The next generation (HEC-RAS) software will be included in lectures and workshops.

Description. The course focuses on applying computer program HEC-RAS to compute steady-flow water surface profiles. Topics include concepts of open channel flow, data requirements, basic input requirements, output analysis, application of bridge and culvert routines, using the channel improvement option, and floodway determination. Participants have an opportunity to prepare input and analyze output during workshops.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0800 and 1300; (b) Grade:

GS-05 or above. Nominees must be engineers who perform professional work in the fields of hydrology and hydraulics. Nominees should have one or more years of experience in these areas. It is required that course participants be in positions or anticipate being in positions in the next year or two where they will be involved in water surface profile calculations or studies of the effects of channel improvements and levees.

STREAMBANK EROS/PROT

285 **35SBP01A**
Length: 36 Hours **Tuition: $2,180.00**
CEUs: 3.3

Purpose. This course provides supervisors, project engineers and designers, and senior technicians with the latest practical knowledge and design criteria for streambank protection and erosion control.

Description. Participants review river mechanics and geomorphology and problems caused by streambank erosion and streambed degradation and aggradation. The numerous causes of streambank erosion and instability are reviewed to provide guidelines in selecting the proper designs for solving site specific problems. Experienced instructors present lectures and lead discussions, field exercises, and workshops on the following topics: (a) background and fundamentals (hydraulic and geotechnical processes of streambank erosion and failure, causes of streambank erosion and failure, analytical/predictive techniques for streambank erosion and failure); (b) streambed degradation protection measures (various types of grade control structures); (c) streambank protection measures (general design and selection considerations; cold regions and environmental considerations; stone protection including riprap blankets trench fill and windrow revetments; low cost streambank armoring using materials such as soil cement, various proprietary products, used tires, and sack revetment; indirect protection measures such as dikes, retards, and proprietary methods; vegetative covers; and geotechnical stabilization measures such as subsurface drainage, slope flattening and benching, and retaining walls); (d) construction and maintenance of streambank protection projects; and (e) engineering experience (successful and unsuccessful projects; open forums for discussion and questions).

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0000-0100, 0400, 0800 and 1300, and (b) Grade: GS-05 or above. This course is designed for students interested in an overview of basic fundamentals of streambank failure and erosion and the available methods for protecting streambanks.

The title of this course was changed from “Streambank Protection” to “Streambank Erosion and Protection” to reflect major revisions to the original course content. Students who completed this course prior to 1990 are encouraged to retake it under the new title because the training material has been significantly revised and updated.

Course #394 entitled “Advanced Streambank Protection” is also offered for students involved in detailed planning and design studies. Students should complete the basic Streambank Erosion and Protection course described above before taking the advanced course.

Notes. This course contains requirements which are mandatory for course completion and may require an estimated 2 hours of overtime. It is your responsibility to bring this to the attention of your supervisor so that an overtime request can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

Session	Location	Date
2004-1	Vicksburg, MS	10/20/2003 10/24/2003
2004-2	Vicksburg, MS	03/22/2004 03/26/2004

STRU STEEL FASTENERS

747 **35SSF01A**
Length: 16 Hours
Video Run Time: 1.4 Hours **Tuition: $700.00**

Purpose. This course provides the participant with the basic technical knowledge required to identify counterfeit bolts and provides instruction to quality assurance personnel on methods to assure the construction contractor is providing contract specific fasteners and installing them properly. The course sequence is consistent with Corps quality assurance principles.

Description. Topics covered in this course are divided into 9 modules, as follows: (a) Structural Steel Fasteners; (b) Plans and Specifications; (c) QA Planning; (d) Coordination Meeting; (e) Construction Quality Control (CQC) Plan; (f) Shop Drawings; (g) Preparatory Phase of Control; (h) Initial Phase of Control; and (i) Follow-up Phase of Control.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0802, 0809, 0810; (b) Grade: GS-05 or above; (c) Other: Current or projected assignment as quality assurance personnel, technical or engineer, with verification responsibilities. Students should have completed the Construction Quality Management (classroom or exportable) course.

SURVEY I: BASIC PRINCIPLES

295 **35SV101A**
Length: 36 Hours **Tuition: $1,350.00**
CEUs: 3.0 **PDHs: 30**

Purpose. This course provides surveyors, planners, designers, and CADD/GIS developers with a fundamental knowledge of basic conventional field surveying procedures and with the computational techniques needed to support civil works, military construction, and environmental restoration projects. It also supports USACE hydrographic, topographic, and real estate

surveying activities. This course covers all basic surveying procedures typically required to support Corps design, construction, operations, and maintenance activities and supplements surveying knowledge required for A-E quality assurance. (Survey II: Construction, Course No. 339, is intended to be a follow-on to this course.)

Description. Specific topics covered in the course include surveying mathematical concepts; the rectangular coordinate system; angle and distance measurement; traverse surveys in support of engineering design and field construction stake out; traverse computations and balancing methods; field taping; trigonometric and differential leveling field procedures and note reduction; state plane coordinate systems; topographic surveying techniques; map accuracies; electronic total stations; land boundary surveys; and error analysis.

Prerequisites. Nominees should be assigned (a) selected positions in occupational series 1300 (Surveyors), 0800 (Engineers), 1100 (A-E Contract Administrators), (0400) (park rangers), and planners, designers, construction inspectors, and CADD/GIS developers involved with civil works, construction, and environmental restoration projects who require a basic understnding of survey procedures and computational techniques. Waivers will be considered. (b) Grade: GS-03 or above; (c) A general working knowledge of high-school-level algebra and trigonometry. and (d) A general working knowledge of scientific calculators for computing trigonometric functions and for converting degree-minute-second angular measurements to decimal equivalents.

Notes. Students should bring a hand-held, scientific-type calculator to class. Varying instrumentation and field procedures are utilized within USACE Districts; therefore, field exercises are not an integral part of this course. Field demonstration on the use of survey instruments is conducted during the course.

Session	Location	Date
2004-1	Huntsville, AL	05/10/2004 05/14/2004

SURVEY II: CONSTRUCTION

339 **35SV201A**
Length: 28 Hours **Tuition: $1,390.00**
CEUs: 2.1 **PDHs: 21**

Purpose. This course provides participants with the fundamental techniques of construction surveying, as used in supporting Corps facility management, environmental restoration, military construction, real estate, navigation, dredging, and construction and operation activities.

Description. Specific topics covered in the course include the following:

- o Land area computations and partitioning of tracts.
- o Horizontal curve computations and stake out.
- o Vertical curve computations and stake out.
- o Topographic surveying and mapping using surveying instruments, transit,and electronic total station development techniques.
- o Construction surveying, including field practice.
- o Stake out, grading, etc.
- o Earthwork.
- o Map presentations.
- o State plane coordinates.
- o Construction control.
- o Pipe/tunnel construction.
- o Culvert and bridge survey layout.
- o Building construction layout.
- o Highway and street layout.
- o Structural deformation surveys of locks and dams.

Prerequisites. Nominees must be assigned to (a) selected positions in occupational series 0800 (engineers), 1300 (surveyors), 1100 (A-E contract administrators), planners, designers, construction inspectors, or CADD/GIS developers involved with civil works, construction, or environmental restoration projects who require an understanding of current construction surveying procedures, methods, and computational techniques. Waivers will be considered.(b) Grade: GS-04 or above; (c) The computations presented in this course will require an understanding of high-school-level algebra and trigonometry; and (d) A general working knowledge of a scientific-type, hand-held calculator in computing trigometric functions and in converting degree-minute-second angular measurements to decimal equivalents.

Notes. Students should bring a hand-held, scientific-type calculator to class. Varying instrumentation and field procedures are utilized within USACE Districts; therefore, field exercises are not an integral part of this course. Demonstration on the use of survey instruments is conducted during the course. This course is intended to be a follow-up of Course #295 Survey I: Basic Principles.

Session	Location	Date
2004-1	Huntsville, AL	07/13/2004 07/16/2004

SURVEY III: MAPPING

296 **35SV301A**
Length: 36 Hours **Tuition: $1,950.00**
CEUs: 2.7 **PDHs: 27**

Purpose. This course provides engineers, cartographers, surveyors, planners, project managers and engineering technicians with an overview of the latest techniques used in acquiring and processing topographic elevation data. This data is used for planning, designing and construction of civil works and military and environmental projects. Emphasis is placed on collection techniques used to develop geospatial data bases such as topographic field surveying, LIDAR, and photogrammetric mapping collection techniques (from field to finish). The course provides demonstrations of equipment and software used to collect and process topo-

graphic data sets collected from field surveys. Students apply PC-based software to format and transfer spatial data to CADD systems. Basic photogrammetric mapping principles are reviewed and discussed. Also discussed are A-E contracting for surveying, mapping, and photogrammetric services—this includes related cost estimating, contract administration, and quality control/quality assurance. The course provides several demonstrations as well as significant hands-on experience in the computer laboratory.

Description. Specific topics include:

o GEODESY AND MAP COORDINATE SYSTEMS AND PROJECTIONS:
- Horizontal and vertical datums.
- State plane and UTM coordinate systems.
- Datum translation/transformation techniques (CORPSCON).

o TOPOGRAPHIC MAPPING (FIELD SURVEY DATA COLLECTION TECHNIQUES)
- Electronic total stations and data collectors.
- Field survey procedures for developing topographic data.
- Estimating costs and preparing specifications for field surveys.

o PROCESSING FIELD SURVEY DATA
- COGO software processing techniques.
- Reducing topographic data to ASCII file format.
- Data translation and interface to CADD systems.

o PHOTOGRAMMETRIC MAPPING:
- Basic principles and techniques.
- Project planning for photogramatic data collection.
- Design of typical COE photogrammetric mapping projects.
- Cost estimating.
- Other spatial data collection systems including LIDAR.
- Discussion of basic LIDAR principles.
- Presentation of sample LIDAR data collection projects.

o A-E CONTRACTING FOR SURVEYING AND MAPPING
- Types of procurement contracts.
- COE procedures used to develop, administer and utilize A-E contracts.

Prerequisites. Nominees must be assigned Occupational Series: 0800, 1100, 1300. This course involves hands-on application of PC-based software using standard software computational/translation packages such as COGO and CORPSCON. Therefore, nominees must have a general knowledge of PC operation.

Session	Location	Date	
2004-1	Huntsville, AL	04/26/2004	04/30/2004

SURVEY IV : GPS SURVEYING

203 **35GPS01A**
Length: 36 Hours **Tuition: $1,750.00**
CEUs: 2.9 **PDHs: 29**

Purpose. This course provides training for surveyors, technicians, and engineers in the practical aspects of GPS surveying. The course is designed to provide a technical familiarization with EM 1110-1-1003, "NAVSTAR Global Positioning System Surveying."

Description. This course addresses the planning, data acquisition, data processing, and data analysis components of GPS surveying.

o GPS OVERVIEW:
- System concepts.
- System components.
- Surveying techniques.
- USACE applications.

o GPS PLANNING:
- Site reconnaissance.
- Network planning.
- Session planning.
- Satellite visibility diagrams.

o GPS DATA ACQUISITION:
- Real-time differential.
- Kinematic survey
- Rapid static survey.

o DATA PROCESSING:
- Kinematic survey.
- Rapid static survey.

o DATA ADJUSTMENT:
- Compare and contrast off-the-shelf network adjustment indicators.
- Identify methods utilized to determine observational blunders.
- Determination of accuracy.

o GPS CONTRACTING:
- A-E contract spcifications.
- Cost proposals.
- Questions to ask prospective contractors.
- Evaluation of contract submittals (vectors, adjustments, visibility diagrams, etc.)

o VERTICAL POSITIONING USING GPS

Prerequisites. Nominees should: (a) be selected occupational series 0800 (Engineers), 1300 (Surveyors and Technicians); (b) have hands-on computer experience.

Session	Location	Date	
2004-1	Huntsville, AL	05/17/2004	05/21/2004

TERC TASK ORDER ADM

228 **56TER01A**
Length: 28 Hours

Purpose. This course provides guidance and instruction on how to plan, award and administer cost reimbursable task orders placed against the Total Environmental Restoration Contracts (TERC).

Description. This course covers the background on the TERC Acquisition and Management Plans, and indefinite quantity/indefinite delivery cost reimbursement contracts as a basis for understanding the planning, award, and administration of TERC task orders. Instruction and text material address the development of the task order Scope of Services, cost management and control, subcontracting, Government property, vouchering, task order closeout, and the district office and construction field office administration of both Remedial Investigation/Design and Remedial Action task orders. The roles and responsibilities of the Project Manager, Engineering manager, and Construction division construction manager will be identified in the development and administration of task orders.

Prerequisites. (a) Responsibilities: This course is intended for the Remedial Design and Remedial Action District personnel having significant roles associated with the development and administration of TERC cost reimbursable task orders; (b) Target Audience: HTRW project managers; Engineering managers; construction managers (including Construction Division Area Engineers, Resident Engineers and Office Engineers/ Contract Administration, Project Engineers); TERC Contracting Officers (including Administrative Contracting Officers and Contracting Officer's Representatives); contract specialists; and Office of Counsel; (c) Grade: GS-11 through GS-14; and (d) Prerequisite Training: Nominees should have completed the Environmental Restoration Overview course or received other equivalent training.

Notes. This workshop is only being offered onsite at the request of a District, as opposed to being centrally offered. In an onsite environment,key District personnel involved with the management and execution of specific task orders and the base contract can learn and share experiences in a facilitated environment. This format also allows for the customer, contractor, and regulator to participate in the training for further partnering.

TES ON MIL LANDS

968 **33TML01A**

Purpose. Video-based. Provides information necessary to help installations attain and maintain compliance with existing laws, regulations, directives, instructions, and policies pertaining to the protection and management of threatened and endangered species on and around military and Coast Guard lands.

Description. For those personnel in a natural resource management team who advise commanders and perform tasks to prevent violations pertaining to threatened and endangered species. Modules include: Overview; Inventorying and Monitoring TES; Protecting TES; Recovery and Enhancement TES; and Accomplishing Protection of TES in Harmony with the installation.

TIME AND COST MANAGEMENT

703 **46TCM01A**
Length: 12 Hours **Tuition: $400.00**

Purpose. The Professional Development Support Center (PDSC) is partnering with the University of Alabama in Huntsville (UAH) to offer you the Project Management Certificate Program. This program consists of seven core courses which make up two tracks of study. The first six courses make up Track One which is a general overview of the Project Management knowledge and skills areas. You can take one, two, or all of these courses depending on your individual needs.

Track Two consists of the PMP Examination Review and is intended to prepare Project Managers for the Project Management Professional Examination offered by the Project Management Institute (PMI). The PMI awards Project Management Certification for the successful completion of the Project Management Professional Certification Examination.

The UAH Professional Development Project Management Certificate Program certificate is awarded after the successful completion of the seven core courses.

These courses will be taught via the PDSC VideoTeleconferencing System. They will originate at PDSC and be broadcast to your respective site.

Description. The first step in successfully managing a project's schedule and costs is to have a project budget and timeline that realistically reflects project execution requirements. You will learn the necessary initiating process for a well-planned program and how to develop reliable cost estimates by assessing necessary project resources, applying one or more cost estimating methods, and adjusting the estimates based on resource availability and project risk. Learn to determine during the planning process how to devise what must be done, how and in what order it will be done, what resources will be required to complete each step, and how success will be measured. Learn to coordinate people and other resources to carry out the plan during the execution process and how to ensure that project objectives are met. Learn how to discover schedule and cost problem areas in your program, resolve issues affecting them, and shape your project's future.

TRIAL ATTORNEY

179 **37TLA01A**
Length: 40 Hours

Purpose. This course prepares and updates Corps trial attorneys on trial advocacy skills and practice before Boards of Contract Appeals.

Description. The course is conducted utilizing representatives from the Chief Trial Attorney's office, the Armed Services or Engineer Board of Contract Appeals, and experienced CE trial attorneys. Topics include preparing motions and pleadings, discovery, ethics, witness preparation, dispute resolution options, case management, conduct at trial, examining witnesses, briefing, and appeals. Also included are workshops on evidence, depositions, and trial. After completing the course, a student will be competent to represent the government as respondent's counsel in a Type I or II contract appeal.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0905; (b) Grade: GS-11 or above.

UNSTEADY FLOW HEC-RAS

188 **35UFA01A**
Length: 36 Hours **Tuition: $1,870.00**

Purpose. This course focuses on the use of the computer program HEC-RAS for the analysis of one-dimensional gradually varied unsteady open channel flow. The role and application of this model in Corps' flood studies is presented in lectures, workshops and examples.

Description. Primary coverage is on one-dimensional open channel hydraulics. This covers the theory, applicability, limitations, and data requirements of the HEC-RAS unsteady flow program. Guidance in selecting appropriate routing techniques for a range of problems is presented. Case studies and computer workshops are used to illustrate model usage.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 0810 and 1300; (b) Grade: GS-07 or above. Nominees must have a good background in open channel hydraulics and familiarity with HEC-2, or HEC-RAS. Familiarity with the partial differential equations of fluid motion and numerical solution techniques is desirable. Participants should be in positions requiring analysis of complex hydraulic problems.

Session	Location	Date
2004-1	Davis, CA	03/08/2004 03/12/2004

VALUE ENGINEERING

110 **35VEW01A**
Length: 40 Hours **Tuition: $1,060.00**
CEUs: 3.2 **PDHs: 32** **LUs: 32**

Purpose. This course provides the participant with the requirements, policies, and procedures necessary to enable the student to perform effectively as a value engineering study team member or leader; to recognize potential areas for VE studies; to identify the value of having an active Value Engineering program; and to motivate the participant to support continued development.

Description. Through lectures, conferences, and workshop sessions, this course provides the history of value engineering and its development in the Corps of Engineers, the need for value engineering in Corps construction, the methodology employed, the value engineering program, and contractor participation in the program. Nominees participate in class exercises and discussions. Approximately half of the course is devoted to workshops in which all participants are involved in actual value engineering studies of construction items selected by the offices involved. This course is designed primarily for training construction and design engineers and technicians in the principles and application of value engineering; however, all levels of management benefit by participating in this course.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0340, 0800, 1300, and 1008; (b) Grade: GS-05 or above; (c) as managers with authority and responsibility for decision-making having a cost impact on Corps of Engineers projects. The course is also open to individuals who have a current or projected (within 1 year) assignment requiring knowledge of value engineering methodology. The nominee must not have attended this course in the past 5 years. Nominees must be approved by the local Value Engineering Officer of the nominating division or district.

Notes. This course of instruction complies with the certification standards set forth by the Society of American Value Engineers (SAVE) to fulfill the Module I workshop requirement portion for Certified Value Specialist.

Session	Location	Date
2004-1	Huntsville, AL	04/26/2004 04/30/2004

VISITOR ASSIST MGT & POL

324 **35VAU01A**
Length: 20 Hours **Tuition: $740.00**
CEUs: 1.8

Purpose. This course provides an overview of the Corps of Engineers Visitor Assistance Program to promote consistency in Visitor Assistance policy application and explore alternative management techniques and practical applications.

Description. Topics covered in this course include the policy status and direction of the Visitor Assistance Program, Title 18, Title 36, communications, and legal liabilities.

Prerequisites. Employees who have attended the Visitor Assistance Update course within the past 5 years should not schedule this course. Attendees should be managers and supervisors at project, district, or division level who plan and manage the Visitor Assistance Program. Park Rangers, GS-9, may also attend, but they will be given a lower priority. Nominees must be approved by the Natural Resources Functional Manager at the division level. Corps Security Specialists (GS-0080), Corps military personnel serving in a security capacity and Operational Project Managers may attend the course to gain a better understanding of the Corps Visitor Assistance Program.

Notes. The basic Visitor Assistance NRM (No. 147) course is not a prerequisite of this course. Employees responsible for but not directly in charge of the Visitor Assistance Program (i.e., operations project managers and section branch and division chief(s)) are eligible. This course does not satisfy the requirement for authorization of citation authority.

Session	Location	Date
2004-1	Huntsville, AL	02/04/2004 02/06/2004

VISITOR ASSIST NRM

147 **35VAN01A**
Length: 36 Hours **Tuition: $980.00**
CEUs: 3.2

Purpose. This course, in combination with other required training, satisfies the minimum requirements for Authorization of Citation Authority. This course is designed to develop an understanding of the formulation, purpose, and limitations of the Corps of Engineers Visitor Assistance Program and to prepare trainees to handle the special responsibilities required in performing their official duties. This training is supplemented by detailed Division/District instruction of citation authority implementation procedures. In order to obtain citation authority, the graduate must complete the required Basic Visitor Assistance Training Curriculum (EC 1130-2-213 - Policy revision to ER 1130-2-550. Chapter 6), have principle duties in recreation and NRM and be certified by the District Commander as per ER 1130-2-550, Chapter 6.

Description. Topics covered in this course include: organization policy and mission, Title 36 and program development, Title 18, authority and jurisdiction, magistrate court, torts claims, ranger responsibilities and image, legal constraints, enforcement procedures, situational analysis, tactical communication, and personal protection techniques.

Prerequisites. Employees who have previously received this training shall be nominated for the Visitor Assistance Management and Policy course (No. 324). Nominees must be assigned (a) Occupational Series: 0025, 0023, or special series such as biologist, forester, etc.; (b) Grade: GS-04 or above, seasonal and temporary employees included (employees of lower grade who are or will be performing similar duties may attend at the discretion of their manager/training coordinator). Nominees must be currently serving or have an anticipated assignment as a Corps Park Ranger or be in a directly related job such as a forester, a wildlife and fisheries manager, or a biologist. Trainees should have less than 4 years experience in the Visitor Assistance Program, as per ER 1130-2-550. Nominees must be approved by the Natural Resources Functional Manager at the Division level.
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Session	Location	Date
2004-1	Huntsville, AL	11/03/2003 11/07/2003
2004-2	Huntsville, AL	02/02/2004 02/06/2004
2004-3	Huntsville, AL	07/26/2004 07/30/2004

VISITOR SURVEYS

750 **54VSD01A**
Length: 4 Hours
Video Run Time: 41 Minutes **Tuition: $325.00**

Purpose. This course provides prospective survey interviewers with the skills necessary to collect field recreation use data in developed recreation areas.

Description. Modules of instruction include (a) Explaining Visitor Surveys; (b) Collecting Materials for Surveys; (c) Reading Survey Meters; (d) Setting up the Survey Site; (e) Surveying the Visitor; (f) Taking Down the Survey Site; and (g) Delivering the Data. The course consists of one VHS video tape, a Facilitator's Guide, and a Student Study Guide. The course facilitator should be familiar with visitor survey techniques.

Prerequisites. Nominees should be those persons who conduct traffic stop surveys at Corps projects. Introduction to computers and DOS-based systems training is helpful.

WATER & WATERSHED

164 **33WAW01A**
Length: 36 Hours **Tuition: $1,930.00**
CEUs: 2.7

Purpose. This course provides participants with an understanding of the physical nature of the water of the watershed, the role of water in shaping life of the watershed, and the conceptual, technical and institutional tools available for planning and management of its water resources.

Description. The course covers the occurrence, movement, storage, and control of water (surface and ground water hydrology); the natural development of the landscape (geomorphology); the concept of the watershed as a bioregion and ecosystem; the role of the solid mantle as a living filter and the effects of wastewater on stream and river water quality; the development of the water resources for multiple-purposes; the restoration of natural features in wetlands and Corps' restoration projects; and the social, cultural and institutional ele-

ments of watershed management. Understanding the physical nature of water and its many roles in the watershed is prerequisite to effective planning and management. Conceptual tools to be discussed include adaptive management, and collaborative management with other stakeholders to resolve water conflicts. Technical tools include: accessing data and information via the Internet; methods and models available to simulate hydrologic and ecologic features; water budget analysis; Geographic Information Systems (GIS); and current communications technology for study management such as Web sites, e-news, e-conferencing, e-calendars. The course will discuss the many new and active local organizations with a stake in the water of the watershed and the role of the Corps in watershed initiatives and partnerships.

Prerequisites. Nominees must be assigned (a) Occupational Series: Selected 800 and 400 series, 028, 819, 184, 101, 401, and 1301, (b) Grade GS-09 and above. Nominees should be water control managers, hydrologists, hydraulic engineers, environmentalists, biologists, economists, sociologists, ecologists, or study managers.

Session	Location	Date
2004-1	Davis, CA	09/13/2004 09/17/2004

WATER DATA MGT/HEC-DSS

152 **54MDH01A**
Length: 36 Hours **Tuition: $2,060.00**

Purpose. This course provides Corps of Engineers' water resource professionals with detailed instruction on available computer software to develop, manage, analyze, and display engineering data in the HEC Data Storage System (HEC-DSS) and the new HEC-DSSVUE program. The procedures and programs provide a convenient system to support a variety of applications including hydrologic, water quality, and flood damage analysis. The system is designed for handling both historical and real-time data

Description. Data management tools, provide a systematic means for organizing, storing, retrieving, manipulating, and sorting data for simulation and plan evaluation models. The HEC data storage systems allow for a convenient, orderly exchange of data among many application and analysis programs. This course focuses on the Data Storage System and the DSSVue graphical user interface. Applications with HEC programs to create data files, to manage and manipulate those data, to provide statistical analysis, and to develop graphical and tabular displays are included. Applications will be demonstrated with workshops and case studies. Major topics covered are (a) use of the HEC Data Storage System; (b) HEC-DSSVue graphical displays; (c) presenting data in a report form; (d) data entry; (e) statistical analysis and mathematical operations of data; (f) hydrologic applications; and g) user-developed scripts for data presentation.

Prerequisites. Nominees should be assigned (a) Occupational Series: 0400, 0800, and 1300; (b) Grade: GS-07 or above. Nominees should be familiar with Windows.

Session	Location	Date
2004-1	Davis, CA	11/03/2003 11/07/2003

WATER QUALITY MGT

177 **33WQM01A**
Length: 36 Hours

Purpose. This course provides a basic overview of federal statutes, Corps of Engineers guidance, and technology applicable to water quality and environmental management of water resource projects.

Description. Students will receive an overview of reservoir-watershed relationships; reservoir and tailwater characteristics and processes; aquatic ecology; water quality assessment techniques; and data interpretation. Participants are introduced to mathematical models and other techniques and technology useful in water quality assessment and management.

Students will participate in case studies on the application of assessment and management techniques. Water quality problem anticipation, identification, and solution/improvement are included. A discussion of current issues and topics relevant to water quality management and water control is included. These discussions may include: potential conflicts between nonfederal hydropower development and water quality considerations, emergencies (floods and droughts) and water quality considerations, contaminants, nonpoint source management and risk assessment.

Prerequisites. This course is intended for engineers, hydrologists, biologists, and others who are involved in water control, water quality, and other hydrologic investigations. Nominees should be assigned (a) Occupational Series: Selected 0400, 0800 and 1300; (b) Grade: GS-07 or above.

WELDING DESIGN

162 **35WLD01A**
Length: 36 Hours **Tuition: $1,460.00**

Purpose. The course teaches the participant, with a limited knowledge of welding or no background in welding, to create and draft replacement designs, to redesign or reinforce welding designs, and to communicate this information to field personnel.

Description. The course covers design considerations and proper communication of welding processes, joint designs, weldability of metals, design methods, weld size determinations, weld costs estimating, design formulas, failure analysis of past design problems, and economics of welding.

Prerequisites. Nominees must be assigned and/or meet all of the following: (a) Occupational Series: Selected 0800 and 1600; (b) Grade: GS-07 or above; (c) have current or projected assignments requiring welding design and inspection responsibilities.

Notes. This course contains requirements which are mandatory for course completion and may require overtime. It is estimated that 6 hours of overtime may be required. It is your responsibility to bring this to the attention of your supervisor so that an overtime request/determination can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

Session	Location	Date
2004-1	Troy, OH	04/26/2004 04/30/2004

WELDING—QV

116 **35WLQ01A**
Length: 36 Hours **Tuition: $1,190.00**
CEUs: 2.9 **PDHs: 29**

Purpose. This course teaches the participant to interpret the various methods and techniques employed in weldments and assuring the quality of welds.

Description. Through lectures, conferences, and practical exercise sessions, this course covers the subjects of welding safety and precautions, welding symbols, processes and quality assurance problems, roof decking welding, codes, procedures, and operator qualification, filler metals, workmanship, visual inspection, dye penetrant, magnetic particles, radiographic and ultrasonic testing techniques and interpretation, and destructive testing. Quality assurance in welding is emphasized.

Prerequisites. Nominees must be assigned and/or have all of the following: (a) Occupational Series: 0801, 0802, 0809, 0810, and selected 0800; (b) Grade: GS-05 through GS-11; (c) other: Students should have current or projected assignments with welding quality assurance responsibilities. They must have previously completed the Quality Verification: General Construction course and must not have attended this or a similar course within the past 5 years. (d) An exportable training course "Quality Verification: Basic Welding" is available and would be helpful for students to complete prior to attending this course. It is strongly recommended for those who have minimal welding experience.

Notes. This course contains requirements which are mandatory for course completion and may require an estimated 6 hours of overtime. It is your responsibility to bring this to the attention of your supervisor so that an overtime request can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

Session	Location	Date
2004-1	Troy, OH	01/26/2004 01/30/2004
2004-2	Troy, OH	02/23/2004 02/27/2004

WET MIT BANK DEV/MGT

239 **33WMB01A**
Length: 36 Hours **Tuition: $2,550.00**

Purpose. Mitigation banking has gained acceptance as a tool for managing some wetland losses. With the recent interagency policy on mitigation and the increased use of banking, it is imperative that Corps of Engineers personnel be able to apply mitigation banking principles to the plan, design, implementation, and management of mitigation banks.

Description. This course is offered cooperatively between the USACE Waterways Experiment Station and the Institute for Water Resources to bring together their expertise in mitigation banking issues. Based on the technical experience from WES in ecosystem restoration, management, and functional evaluation and the national mitigation bank study conducted by IWR, the course will provide students with the wide base of knowledge required to develop and manage successful mitigation banks. The course will address such subjects as setting bank goals, Federal agency perspectives on banking, financial assurances, calculation and management of credits and debits, use of the Hydrogeomorphic (HGM) Wetland Functional Assessment Method, considerations for siting and planning, and success criteria. These subjects will be illustrated with case studies of mitigation banks from around the country and interactions with people directly involved with mitigation banks. Field exercises will allow practice of some aspects of classroom instruction. The course is designed primarily with the regulator in mind; however, personnel from other Corps mission areas may benefit from the course material.

Prerequisites. Nominees must be assigned: (a) Occupational series: All occupational series are accepted. Priority will be given to regulatory personnel. Experience in mitigation is strongly recommended; and (b) Grade: GS-09 and above.

Session	Location	Date
2004-1	Orlando, FL	06/28/2004 07/02/2004

WETL CONST WQ IMP

275 **33CON01A**
Length: 36 Hours **Tuition: $2,590.00**

Purpose. The Constructed Wetlands course is a course designed to give Corps personnel state-of-the art technical knowledge that is essential to construct wetlands that will achieve predetermined levels of water quality improvement to either point or nonpoint water sources. Strong emphasis is placed on planning, design, engineering, construction, operations and maintenance and monitoring. An integrated interdisciplinary team ap-

proach in designing wetlands is emphasized. This will involve presenting information on numberous interacting functions, processes and values from multiple disciplines associated with the primary underlying components (i.e., hydroperiod, hydrosoil, and vegetation) of wetlands to accomplish stated objectives and goals.

Description. Case studies will be presented to explain the effectiveness of surface flow and subsurface flow systems on improving wastewater from municipalities, industries, agribusinesses, and wastewater from confined animal production operations. In addition, students will also be introduced to the latest proven technologies that can be applied to the construction and use of wetlands for improving water quality from acid mine drainage, agricultural runoff, storm-water runoff, military training area runoff, highway runoff, and landfill leachates. Information obtained from this course is applicable to environmental and ecosystem restoration, wetland mitigation, mineland restoration, Brownfield redevelopment, and Superfund site remediation. Problem-solving sessions and field trips to wetlands functioning for water improvement will also be conducted.

Prerequisites. Nominees must be assigned (a) Occupational Series: engineers, hydrologists, soil scientists, biologists, and other disciplines involved in the planning, design, construction, and operation/maintenance of constructed wetlands; (b) Grade level: GS-09 and above. This PROSPECT course is open to any government employee at any level (federal, state, city or county agencies)

Session	Location	Date
2004-1	Oakland, CA	07/12/2004 07/16/2004

WETLAND PLANT IDENT (SE)

423 **33WPI01A**
Length: 32 Hours **Tuition: $1,670.00**

Purpose.

Description. Wetland Plant Identification Workshop Southeastern USA provides the basic identification skills to both, laboratory and field-identify 100-200 wetland plants of concern from a planning, environmental resources, project management, regulatory and natural resource perspective. Meet two (2) leading wetland plant taxonomists in the USA who will be conducting the instruction. Students will have knowledge of and be able to identify Southeastern USA wetland threatened and endangered species and their supportive habitats/ecosystems. Participants will be able to develop and review mitigation plans focused at the plant species level and develop skill in associating the species with habitat changes. Both laboratory and field practical examinations will be conducted to validate obtained skills.

Prerequisites. Planning, Program Management, Regulatory, Natural Resource Management, Environmental Resources, Navigation and Engineering Personnel GS-07 - GS-15.

Session	Location	Date
2004-1	Apalachicola, FL	02/09/2004 02/12/2004

WETLAND RIVER FUNC/ECOL

426 **33WRF01A**
Length: 32 Hours **Tuition: $2,430.00**

Purpose. In the development of the CE Water Resources Development Act (WRDA) projects and other important CE activities, NEPA-driven mitigation measures have required increasingly rigid, complex and watershed-level functional assessments of adverse unavoidable project impacts. Historically, structural (acre for acre) mitigation has been a surrogate for functional (maintain wildlife, habitat, flood flow restoration, water quality, etc) mitigation. This approach is no longer adequate due to the rapid evolution of ecological science and the design of functional assessment methods based upon watershed geomorphology, hydrology, vegetation, landforms and associated habitats. The hydrogeomorphic functional assessment method (HGM) is a Federal Interagency tool developed to address this critical field need. This workshop focuses on small and large riverine systems in eastern and western USA and additionally provides project managers with an introduction to the “new river ecology” knowledge. An understanding of this ecological approach is essential in meeting restoration, enhancement and mitigation objectives. A special section of the workshop will cover restoration alternatives identification and assessment of deeply incised channels and floodplains of selected river systems. Pariticipants will meet and work in facilitated problem solving classroom and field sessions with noted experts in this field.

Description. Topics include: (1) Introduction to wetland river ecology of the late 1990’s, (2) HGM classification system, (3) HGM national and regional guidebooks, (4) Geomorphology of Mississippi River System, (5) River Ecology and HGM Assessment of Rivers in KY, TN, and MT, (6) Case studies restoration, (7) Lesson learned, (8) Mitigation Alternatives Identification/Assessment and, (9) HGM and future WRDAs and other CE authorities and (10) Calculating Habitat Units.

Prerequisites. Nominees may be assigned from engineering, planning, natural resource management, regulatory, etc. to include program/project management functions within the Corps of Engineers. Occupational Series: Open to all including legal, real estate, navigation, etc. This workshop is designed to provide background introductory information.

Session	Location	Date
2004-1	Kalispell, MT	10/06/2003 10/09/2003

WETLANDS DEV & REST

276 **33WDR01A**
Length: 32 Hours **Tuition: $2,280.00**

Purpose. This course provides training in the concepts and practices of ecosystem restoration and development in both inland (fresh water) and coastal areas. The course is directed toward Corps of Engineers biologists, engineers, and natural resources managers concerned with ecosystem restoration including development and restoration of aquatic, wetland and riparian (stream/river) habitats. Practical, hands-on field experience and application of state-of-the-art techniques are emphasized and conducted by the leading national experts in the field of environmental restoration. The basic hydrologic principles in planning for and the development of environmental restoration projects is provided to meet the requirements of the Corps of Engineers and the public. Course focuses on lessons learned over the past twenty years with detailed analysis of hydrology, biology, and soils associated with both successful and failed restoration projects.

Description. National training is conducted at three (3) regional wetland sites representing major wetland ecosystems: East Coast, West Coast, and at a Gulf of Mexico major estuary site. Technical sessions focus on marine, estuarine, and freshwater wetlands development and restoration of the particular coastal area involved (East Coast and West Coast). The Gulf of Mexico site focuses on wetland ecosystem restoration and development nationwide but emphasizes sites in Texas, Louisiana, Mississippi, Alabama, and Florida. All sessions include methods and case study training in site selection, determining water management (hydrology) and site design specifications, plant selection and revegetation techniques, operation and maintenance requirements, procedures for measuring and evaluating success of aquatic, riparian, wetlands, seagrass development and restoration and key factors to consider to determine the cost, manpower, expertise, equipment and materials required to successfully develop and restore these habitats. Selected case studies focused on lessons learned and extensive field exercises are included. Training is also provided for the following topics, as applicable, based on the location of the particular sessions: (1) hydrologic considerations for ecosystem restoration, (2) techniques for developing new and restored coastal and interior wetlands and seagrass beds, as applicable, using selected case studies, (3) techniques and examples for using wetland vegetation as an alternative to structural techniques for shoreline and levee erosion control, (4) identification of sources and methods for obtaining suitable plant stock including key factors that affect development and restoration costs and success rates; and (5) mitigation techniques for evaluation, predicting and reducing impacts of engineering activities in wetlands and seagrass areas, (6) guidance on key factors that should be considered when preparing work orders and contracts for restoration activities.

Prerequisites. Nominees must be assigned (a) Occupational Series: 0025, 0028, 0150, 0400, 0800, and 1300. Highly recommended for planning, regulatory, environmental resources, policy, engineering and natural resources management personnel and those involved with the planning and implementation of ecosystem restoration projects, regulating and evaluating restored wetlands and seagrass; (b) GS-07 and above is suggested.

SPECIAL INSTRUCTIONS: Wetland classes are scheduled during mild periods of the year; however weather conditions can and do change dramatically at the field sites and students should expect to get wet and have extensive hands-on field exercises. Student nominations should be submitted for the location most closely related to your own training areas but should not preclude the opportunity to view and experience advanced geographical specific ecosystem wetland restoration and development projects at other Corps project sites.

Session	Location	Date	
2004-1	Apalachicola, FL	02/23/2004	02/26/2004
2004-2	Hasting, MI	07/19/2004	07/22/2004
2004-3	Olympia, WA	08/30/2004	09/02/2004

WETLANDS EVAL

273 **33WEP01A**
Length: 36 Hours **Tuition: $2,510.00**
CEUs: 2.2 **PDHs: 22**

Purpose. In planning civil works projects, wetlands, restoration or mitigation measures now require increasingly rigid and complex evaluation of the benefits expected from the wetlands restored or replaced. Restoration of wetlands on existing Corps project lands under Section 1135 or 206 also require increasingly sophisticated evaluation techniques for their justification. This course provides an in-depth introduction and overview of existing wetland evaluation procedures and case study application to wetland systems for environmental impact assessment and evaluation purposes. Methods to identify and evaluate the functions of wetlands and their corresponding values to the ecosystem and society will be discussed. Evaluation of wetlands' role in an ecosystem and watershed setting will be addressed. The requirements for wetlands evaluation and justification during project planning, operations, and the natural resources management phases of the civil works program will be stressed.

Description. Topics include (a) introduction and overview of wetlands evaluation procedures and techniques currently in use and being developed; in-depth discussion of those selected techniques particularly applicable for Corps project planning and operations purposes; (b) discussion of the field operational applicability and constraints of selected wetlands evaluation techniques; (c) review of case studies and lessons learned; (d) laboratory, demonstration, and field experience with selected evaluation methods and specific

wetland functions; and (e) open discussion and problem-solving.

Prerequisites. Nominees must be assigned (a) primarily as planning division and natural resources management personnel operations and regulatory functions personnel will also benefit; (b) Occupational Series: planning division personnel (biologists, engineers, economists, and other professionals in the planning function) as well as operations staff (natural resources management, dredging), environmental specialists, and regulatory staff; (c) Grade: GS-09 or above; and (d) successful completion of "Fundamental of Wetlands" (PROSPECT course No. 272), or equivalent field experience or course work.

Session	Location	Date	
2004-1	Dauphin Island, AL	03/22/2004	03/26/2004

WETLANDS ON MIL LANDS

969 **33WML01A**

Purpose. Video-based. Provides information necessary to help installations attain and maintain compliance with existing laws, regulations, directives, instructions, and policies pertaining to the protection and management of wetlands on and around military and Coast Guard lands.

Description. For those personnel in a natural resource management team who advise commanders and perform tasks to prevent violations pertaining to wetlands. There are five modules: Overview of Wetlands Management; Delineating and Inventorying Wetlands on and Around the Installation; Protecting and Preserving Wetlands on the Installation and Those Wetlands Around the Installation That May be Affected by the Military Mission; Enhancing the Wetlands Environment Through Mitigation, Creating New Wetlands, and Banking Wetlands; and Accomplishing the Military Mission in Harmony with Management of Installation and Area Wetlands.

WORKING DIVER

35 **58DVS01A**
Length: 160 Hours **Tuition: $4,540.00**

Purpose. This course provides Corps of Engineers employees who are assigned as divers, diver supervisors, and/or agency diving coordinators with the necessary skills, knowledges, and abilities to safely perform their assigned underwater tasks. This training will provide students with state-of-art technology and methodology to safely perform underwater diving operations and effectively manage diving contingencies.

Description. Students will become familiar with and perform underwater exercises with state-of-art diving systems including self contained underwater breathing apparatus (SCUBA) and Surface Supplied Air equipment. This course consists of classroom presentations, training pool exercises, open water activities, and practical operations. Sessions pertinent to underwater diving operations will include, but are not limited to, the following topics and activities: (a) diving physics; (b) diving physiology; (c) diving medicine; (d) modern diving systems and support equipment; (e) SCUBA equipment and operations; (f) surface supplied air equipment and operations; (g) decompression principles & associated tables; (h) modern diving accident management techniques; (i) working dive planning; (j) diver supervision principles and practices (k) preparation and use of Activity Hazard Analyses; (l) USACE, OSHA, and US Navy diving regulations (ER 385-1-86, EM 385-1-1, 29 CFR 1910, and US Navy Diving Manual); and (m) management of the diving function.

Prerequisites. (a) Students for this course must have a current or projected assignment to a position requiring underwater diving skills and prior to attending this training must hold a SCUBA training certificate or equivalent from a nationally recognized diver training organization, e.g., PADI, NAUI, etc. Failure to provide evidence of diver certification will be cause for rejection; (b) Nominees must successfully complete a diving medical examination as detailed in ER 385-1-86 within the past 11 months and provide a copy of the completed medical form to the training agent on the first day of class; and (c) Students must participate in all lectures, written and practical exercises, and score at least 70 percent on the comprehensive post-course examination to receive diver certification. Exceptions or deviations to any of these prerequisites shall be approved by the HQUSACE Safety and Occupational Health Office.

Session	Location	Date	
2004-1	Key West, FL	09/07/2004	09/30/2004

DISTANCE LEARNING -YOUR TRAINING SOLUTION

Distance learning has been defined by the United States Distance Learning Association as "The delivery of education and training through electronically mediated instruction including satellite, video, audio-graphic, computer, multi-media technology and other forms of learning at a distance." Distance learning provides training opportunities to the workplace when and where it's needed.

The United States Army Corps of Engineers Professional Development Support Center's (PDSC) Distance Learning Division can assist your organization in meeting its training goals. The PDSC has provided quality distance learning products to the Corps of Engineers and other government agencies for over 20 years. Selected training and awareness courses are offered through video and CD-ROM-based exportable courses, video-teletraining, and web-based (Internet) training courses.

Exportable courses are a series of job-related exportable training courses that provides a set of training materials that can be used at local offices. Exportable courses are visual-based, task active, and facilitator-led. The course components are integrated and dependent upon each other to train successfully. A typical exportable course is composed of a Visual Content Carrier (video tape or CD-ROM), a Facilitator's Guide, and a Student Study Guide. The local facilitator coordinates these materials and serve as the training motivator and moderator.

Video TeleTraining (VTT) provides access to broader educational and training opportunities and specialized expert assistance. The best Corps trainers present stimulating lectures on technical, professional, and organizational development in real time via audio and video transmissions.

Web-based Training (WBT) is an innovative approach to distance learning in which computer-based training is provided through the World Wide Web, the Internet, and intranets. Web-based training presents live content, as fresh as the moment and modified at will, in a structure allowing self-directed, self-paced instruction in any topic. WBT is media-rich training fully capable of evaluation, adaptation, and remediation, all independent of computer platform.

PROCEDURES FOR PURCHASING DISTANCE LEARNING COURSES

The Distance Learning Training Program is a pay as-you-go system. This means that each course must pay for itself. Therefore, agencies purchasing a distance learning course are required to forward funds to the U.S. Army Engineering and Support Center, Huntsville, to cover the purchase prior to our shipping course materials to the agency.

The preferred method of reimbursement for video-based courses is via a government issued credit card. Government credit card transactions can be accomplished by contacting, Judy Armstrong, 256-895-7419. Reimbursement for course materials can be by an Intra-Army Order for Reimbursable Services (IAO), DA Form 2544, or a Military Interdepartmental Purchase Request (MIPR), DD Form 448. Web-based students can submit DD 1556s or MIPRs for training costs. The IAO or MIPR should be sent to:

Commander
U.S. Army Engineering and Support
Center, Huntsville
ATTN: CEHNC-RM-B
P.O. Box 1600
Huntsville, AL 35807-4301

For all types of distance learning courses the IAO or MIPR should state the title of the course, billing address, shipping address and telephone number of the receiving agency. If materials are requested, the number of video sets, Facilitator Guides (FGs), Student Study Guides (SSGs), floppy disks and/or CDs should be indicated. The course description page includes the cost. Additional FGs are $25 each. Additional SSGs are $20 each.

The Professional Development Support Center can assist you in making "Distance Learning -Your Training Solution". For information about the distance learning program, contact James Mitchell at 256-895-7413 or visit our web site at http://pdsc.usace.army.mil.

PROJECT MANAGEMENT CERTIFICATE PROGRAM

The Professional Development Support Center (PDSC) is partnering with the University of Alabama in Huntsville (UAH) to offer the Project Management Certificate Program. This program consists of seven core courses which make up two tracks of study. The first six courses make up Track One which is a general overview of the Project Management knowledge and skills areas. You can take one, two, or all of these courses depending on your individual needs.

Track Two consists of the PMP Examination Review and is intended to prepare Project Managers for the Project Management Professional Examination offered by the Project Management Institute (PMI). The PMI awards Project Management Certification for the successful completion of the Project Management Professional Certification Examination.

The UAH Professional Development Project Management Certificate Program certificate is awarded after the successful completion of the seven core courses.

These courses will be taught via the PDSC Video TeleTraining (VTT) System. They will originate at PDSC and be broadcast to your respective site.

Tentative Schedule: TBD

Dates: TBD
Costs: $400 per course

Track One:

Course Descriptions:

PROJECT TEAM DEVELOPMENT AND DYNAMICS

700

Training Length: 12 hours
CEUs 1.2

Managing project human resources and communications are two of the most important duties of a project manager. Project managers must keep project owners, team members, management, subcontractors, and others informed of project status, while constantly evaluating where the project is and where it is going. Learn to assess your project communication needs, plan for meeting those needs, and effectively communicate project status and forecasts throughout the project life-cycle. Project managers require an understanding of the human dynamics that impact personal success as a team leader. Learn to develop stronger working relationships with your colleagues while developing skills to evaluate and improve your team's performance.

PROJECT SCOPE MANAGEMENT

701

Training Length: 12 hours
CEUs 1.2

Project Scope Management will focus on the processes involved in preparing and refining the technical performance parameters of the project. Dealing with the entire life cycle of a project and the critical technical performance decisions incident to each phase, you will learn practical skills as well as the theory of project scope management. The interrelationship of technical performance or "scope" factors and their impacts on other parts of the project will be explored. Learn to differentiate a project, a program, and a subproject, identifying contrasting characteristics of each as well as what makes them related endeavors. Emphasis will be placed on developing effective alternatives to problems as well as how to independently verify the requirements of a project. You will learn that the process phases involved in scope management are the foundation to a project and are key to all other parts of a project.

TIME AND COST MANAGEMENT

703

Training Length: 12 hours
CEUs 1.2

The first step in successfully managing a project's schedule and costs is to have a project budget and timeline that realistically reflects project execution requirements. You will learn the necessary initiating process for a well-planned program and how to develop reliable cost estimates by assessing necessary project resources, applying one or more cost estimating methods, and adjusting the estimates based on resource availability and project risk. Learn to determine during the planning process how to devise what must be done, how and in what order it will be done, what resources will be required to complete each step, and how success will be measured. Learn to coordinate people and other resources to carry out the plan during the execution process and how to ensure that project objectives are met. Learn how to discover schedule and cost problem areas in your program, resolve issues affecting them, and shape your project's future through proactive management.

RISKS CONCEPTS AND MANAGEMENT

704

Training Length: 12 hours
CEUs 1.2

Project managers are critically examining their approach to managing risk. To remain competitive, projects cannot afford to set up contingencies or control measures for every conceivable risk. Risk Concepts and Management teaches the initial process for recognizing strategies for significantly reducing or eliminating project risk by using proactive risk management. During the planning process you will analyze projects to identify and assess work

elements into a workable scheme to accomplish the project. Learn to use uncertainty analysis and decision trees, network analysis, and sensitivity analysis. Learn the process for closing the project risk management plan and bringing it to an orderly end. This course exposes you to the latest analytical tools in quantitative decision analysis and demonstrates how these techniques are applied in the risk management process.

PROJECT PROCUREMENT AND CONTRACT MANAGEMENT

705

Training Length: 12 hours
CEUs 1.2

This class takes a detailed and operational view of the project procurement and contract management process. You will be introduced to the procurement, solicitation, and contract process. Examine an overview of all phases involved in contracting from requirements generation to close out as well as management of the contract with your customer or supplier. You will learn about the common elements of subcontract and contract administration. Learn how to be more successful in the present environment of limited support resources. Special attention is given to the project manager's role in ensuring that your contracting practices maintain the highest level of business and professional ethics. A systematic approach will aid you in developing an in-depth understanding of buyer-seller relationships, direct and indirect costs, preparation of specifications and bids, and the multiple complexities of contract administration.

QUALITY MANAGEMENT AND PERFORMANCE MEASUREMENT

710

Training Length: 12 hours
CEUs 1.2

Quality Management and Performance links the concepts of quality management and performance measurement from planning to close out. Learn about the concern for effective proactive control and adjustment of implemented project plans with special emphasis on control techniques and their integration with cost and schedule. Emphasis will be placed on the methodologies and techniques for controlling project performance by integrating technical performance management, schedule compliance, and cost management activities in an earned value approach. You will examine the tools and techniques available to the program manager to help manage the program and analyze and use data generated by the internal program control system. Additionally, you will learn major methods of presenting technical and performance data to customers, and managing computer-based information systems and associated databases. Find out how to interface effectively with customers on critical project parameters.

Track Two:

PMP EXAMINATION REVIEW

711

Training Length: 15 hours
CEUs 1.5

PMP Examination Review is intended to prepare Project Managers for the Project Management Professional (PMP) Certification Exam offered by the Project Management Institute. The PMP Certification Exam is comprised of 200 questions focusing on the five Process Groups: Initiating, Planning, Executing, Controlling, and Closing, covering the nine Knowledge Areas: Scope, Quality, Time, Cost, Risk, Human Resources, Procurement, Communications, and Integration Management, as delineated in the latest version of the Project Management Institute's "A Guide to the Project Management Body of Knowledge. If you have completed the five core courses in the Project Management Certificate Program or have equivalent experience and want a compressed, targeted approach toward review and PMP Certification exam preparation, this is the course for you. Tips to successful exam prep and performance will be discussed.

INSTALLATION SUPPORT TRAINING DIVISION ENVIRONMENTAL TRAINING BRANCH

Environmental Training Branch of the Installation Sup-Port Training Division provides environmental training program support services for the Army and Department of Defense.

SERVICES AND PRODUCTS

- Assists installation personnel in identifying resources for environmental staff training, including other Army schools.
- Develops or arranges purchase of Integrated Training Area Management (ITAM) products on request.

— Organization-specific environmental aware-ness products, i.e., field cards, posters, videos, job aids.

— Seibert stakes used by DoD to identify "off limits" areas due to environmental or other concerns during training.

- Interfaces with other Services through Interservice Environmental Education Review Board (ISEERB) membership.

— Defense Services Directory of Environmental Education and Training/Tools Catalog.

ELECTRONIC SOURCES OF ENVIRONMENTAL INFORMATION

- DEFENSE ENVIRONMENTAL NETWORK FOR INFORMATION EXCHANGE (DENIX).
  http:\\denix.cecer.army.mil/denix/denix.html
- World Wide Web Address
  http://pdsc.usace.army.mil

Installation Support Environmental Training
POC: David Palmer
Environmental Programs Manager
(256) 895-7451
David.C.Palmer@HND01.usace.army.mil

PUBLIC WORKS INTEGRATED FACILITIES MANAGEMENT SYSTEM (IFS) SYSTEMS AND MANAGEMENT TRAINING CURRICULUM

This curriculum covers five functional areas within the Public Works Directorate: Operational Management, Systems Administration, Data Collection and Interpretation, Financial Management and Work Management. It is strongly recommended that Oracle courses offered by the Army e-Learning/Web Based training at: https://www.atrrs.army.mil/channels/eLearning/smartforce/ be taken prior to attending IFS specific training. Several of our courses require some of these courses as prerequisites.

To sign up for new e-Learning, students must log onto: http://www.attrs.army.mil/channels/eLearning/smartforce/ read the directions to register and establish an AKO User Name and AKO password. After these are accomplished, sign up and register for the courses. These courses are "at no cost" to Military and Civilian Employees.

OPERATIONAL MANAGEMENT:

PW IFS MGMT Course, CRS # 984

SYSTEMS ADMINISTRATION:

Prerequisites: https://www.atrrs.army.mil/channels/eLearning/smartforce/ - Oracle 8i Database Administration courses: 1Z0-023, 1Z0-024, 1Z0-025, 1Z0-026

DATA COLLECTION & INTERPRETATION:

Prerequisite: https://www.atrrs.army.mil/channels/eLearning/smartforce/ - Oracle Introduction 1Z0-001

SQL FOR IFS, CRS # 975
Quality Assurance & Process Improvement Using IFS, CRS # 978
DPW IFS Introduction, CRS # 971

FINANCIAL MANAGEMENT:

DPW Budget/JCA, CRS # 981

WORK MANAGEMENT:

DPW Work Reception, CRS # 980
DPW Work Estimating, CRS # 983
Contr Mgmt Sys (CMS), CRS # 933
IFS for Industrial Engrs, CRS # 986

5-A FEDERAL EXECUTIVE INSTITUTE (FEI)

The Federal Executive Institute offers three types of residential programs at its Charlottesville, Virginia, campus: 4-week Leadership for a Democratic Society, 1-week Work Team Development Programs, and 1-week alumni programs.

NOMINATION PROCEDURES

Annually, HQDA allocates spaces for the 4-week Leadership for a Democratic Society program. (USACE Commands interested in the 1-week Work Team Developmental or Alumni Follow-Up programs are advised to contact FEI directly.) HQUSACE (CEHR-D) requests nominations from all USACE commands and selections are made by the Human Resources Development (HRD) Subcommittee based on the following criteria: performance, employee's statement of interest, prior training, and Commander's endorsement. For more information on the program, you should access websites: www.opm.gov and/or www.cpol.army.mil.

ADDRESS

FEDERAL EXECUTIVE INSTITUTE
1301 Emmet Street
Charlottesville, VA 22903-4899
Telephone: (804)980-6200

FUNDING

All costs are the responsibility of the nominating USACE command.

STUDENT NOTIFICATION

HQUSACE (CEHR-D) will announce selections through HROs/CPACs. FEI will provide read-ahead material to selectees no later than 2 weeks preceding the start of the scheduled class session.

THE LEADERSHIP FOR A DEMOCRATIC SOCIETY PROGRAM

Course Length: 160 Hours;
Location: Charlottesville, VA

PURPOSE. This program is designed to meet the executive development needs of senior level officials in the Federal Government who are already highly skilled in their technical specialties and in the programmatic and administrative processes of their own agencies. The program assumes that executives are concerned about leadership at the executive level and are interested in exploring, with their peers from other agencies, the essence of public service management - a "second profession" that each of them enters when they become a senior official in their agencies. The program also assumes that executives are highly motivated, particularly when assessing their own capabilities, identifying areas in which they need additional development or exposure, and participating in courses which they select to meet their own needs.

DESCRIPTION. The most current information can be accessed on the internet at www.opm.gov and/or www.cpol.army.mil. This program emphasizes a performance-based approach to individual development and leadership in the federal context. The fundamental program objective is to link individual development to improved organizational performance. The program addresses the active leadership role expected of career senior managers and the democratic values and beliefs that underpin that leadership. The theme of "specialist to generalist to leader" is integrated throughout the program as participants focus on innovative federal management practice through access to distinguished speakers and week-long classes that stress the strategic view of executive management and human resource development.

PREREQUISITES. The most current information can be accessed on the internet at www.opm.gov and/or www.cpol.army.mil. Leadership For A Democratic Society is designed to meet the needs of key federal executives in the public sector. Priority for accepting participants into the program will be given in the following order:

1. SES members and those in equivalent positions in other federal pay systems.

2. GM-15 high potential managers and those GM-15s enrolled in or who have completed an approved SES Candidate Development Program.

3. A select number of executives at the equivalent levels from state, local, or foreign governments, from non-profit organizations, and from the private sector.

5-B MANAGEMENT DEVELOPMENT CENTERS

NOMINATION PROCEDURES

The most current information can be accessed on the internet at www.opm.gov and/or www.cpol.army.mil.

AUDIENCE

Specific eligibility criteria for each seminar are listed in course descriptions.

LENGTH OF SEMINARS

Most are 2 weeks; however, a few are 1-week long. The Management Development Centers offer four kinds of seminars:

1. Leadership and Management Development (Seminar for New Managers, Management Development Seminar, and Executive Development Seminar) are the foundation seminars required for those government managers who need to go beyond their immediate organizational perspective to truly understand the breadth and responsibility of their profession as leaders within the Executive branch of government. They serve to strengthen the sense of corporate identity among the government's leadership corps as individuals progress through the leadership ranks. These programs emphasize the critical Constitutional role of the Federal manager and executive in carrying out the policies and priorities of the President. They focus on leadership, provide knowledge and promote understanding of key Administration and Congressional initiatives, and develop those competencies that have been identified by ongoing research as necessary to successful executive and managerial performance.

   - Seminar for New Managers
   - Management Development Seminar
   - Executive Development Seminar

2. Leadership and Management Assessment Programs expose participants and organizations to a variety of assessment instruments, simulations, exercises, and feedback methodologies. These programs are designed to help managers and executives in effective career development and in proving leadership practices.

   - Leadership Assessment Program
   - Management Assessment Program
   - Executive Assessment Program

3. Supervisory and Team Leadership Institute was established to open our programs to a broader range of current and future leaders to help begin the development of a sense of corporate culture earlier in the potential executive's career. These programs are designed to complement our Core Curriculum seminars. They are open to participants at GS-11 and above and are designed around the critical competencies needed as a new supervisor, a team leader, or team member. They will help individuals to examine the competencies needed to enter supervision and to progress further in their development as a future government manager.

   - Leadership Potential Seminar
   - Team Building and Team Leadership
   - Developing High Performing Teams
   - Managing Project Teams
   - Supervisory Leadership Seminar

4. Public Policy and Contemporary Government Issues Seminars provide a forum for career government managers and executives to address key Administration policy implementation issues with senior policy officials and experts from academia and the private sector. This opportunity for interaction between senior level policy implementers is one of the unique strengths of the Management Development Center system. During workshops, participants explore policy issues relevant to their own agencies and programs and to larger national concerns.

   - Alternative Dispute Resolution
   - Developing Customer-Focused Organizations
   - Dynamics of Public Policy
   - Enterprise Government Management
   - Environmental Policy Issues
   - Executive Communications Workshop
   - Executive Forum on Current Issues
   - Federal Budgetary Policy and Processes
   - Federal Human Resources Management
   - Government Performance and Results
   - Management of Information Technology
   - National Security Policy
   - Natural Resources Seminar: Policies and Issues
   - Science, Technology, and Public Policy
   - Strategies to Build High Performing Organizations
   - Transferring Federal Technology: An Introduction
   - Transferring Federal Technology: Advanced Seminar in Effective Strategies
   - United States Foreign Policy Seminar

LONG TERM TRAINING (LTT)

A variety of LTT opportunities are provided by DOD, HQDA, HQUSACE, and local activities. These programs are announced annually in HQDA's Catalog of Civilian Training, Education and Professional Development Opportunities. This catalog is also available on the Army Civilian Personnel Online at http://www.cpol.army.mil. The most popular recurring programs are described below. If you are interested in any of these programs or do not see a program you are interested in, please contact your HRD or CPAC to obtain more information.

1. **HQDA Sponsored Long Term Training**:

   a. The Military Colleges and Fellowship Programs include the National War College (NWC), Industrial College of the Armed Forces (ICAF), Army War College Resident Program (AWC), Army War College Corresponding Studies Program (AWC/CSP), Congressional Fellowship, and the Secretary of the Army Research and Study Fellowship (SAR&SF). Selections for Senior Service Colleges and the Army Congressional Fellowship program are made based on the following: employee motivation; knowledges, skills and abilities; and need for training. The selection criteria for SAR&SF include: outline of proposed study; publications or specimens of work; and need for training. Course descriptions for these programs follow.

   b. Competitive Professional Development Opportunities. This program includes four types of training: university training, developmental assignments, training with industry, and other. The program is announced annually in HQDA's Catalog of Civilian Training, Education and Professional Development Opportunities. The target audience for these programs is military-funded employees covered by HQDA career programs and in grades GS-11 and above.

   c. Other Programs. Other HQDA sponsored training opportunities are described in the annual publication of the Catalog of Civilian Training, Education, and Professional Development Opportunities. These programs include: the Army Sustaining Base Leadership and Management Program, Army Comptrollership Program at Syracuse, Professional Enhancement Programs, and Harvard University Programs. Application procedures and selection criteria are provided in the Catalog. Contact your HRO, CPAC, and/or career program manager to obtain additional information.

2. **HQUSACE Sponsored Long Term Training**.

This training consists of four programs: the Mission Related Graduate Program (MRGP), the Graduate Fellowship in Water Resources and Environmental Law (WREL) Program, the Coastal Engineering Education Program (CEEP), and the Project Management Program (PMP). Nominating procedures, eligibility criteria, and other general information are provided in ER 350-1-416, HQUSACE Centrally and Locally Sponsored LTT. The eligibility criteria includes the following: commander's endorsement, employee's statement of need, performance, supervisory statement of relevance of training to need, and post-training utilization.

SENIOR SERVICE COLLEGES (SSC)

AUDIENCE. Department of the Army civilian employees at the GS/GM-14/15 level who have career status and are serving in permanent competitive appointments; Schedule A, Excepted appointments without time limitation; or, are serving under an Excepted Service appointment in the Civilian Intelligence Personnel Management System (Title 10 USC 1590) and have a minimum of 3 years of consecutive service under one or more permanent appointments. High potential GS/GM-13s will be considered for Army War College only.

REQUIREMENTS. Applicant must have or be able to obtain a TOP SECRET clearance prior to starting the training program. As part of the application process, applicants for SSC are required to sign a mobility agreement obligating them to accept reassignment. These post-graduate assignments may be located in the Continental United States (CONUS) or in an overseas area (OCONUS).

DESCRIPTION OF PROGRAMS:

The National War College (NWC): Conducts senior-level instruction in national security strategy to prepare selected military officers and federal officials for high-level policy, command, and staff responsibilities. NWC focuses on national security policy and strategy with a joint, multiservice perspective. The curriculum is designed to expand and deepen students' knowledge of national security matters and to sharpen their analytical skills. The academic program consists of prescribed core courses, advanced studies, and regional studies. Teaching methods include lectures, seminar discussions, case studies, and student exercises. Location: Fort Lesley J. McNair, Washington, D.C. Length of Training: 10 months.

The Industrial College of the Armed Forces (ICAF): Prepares selected military officers and civilians for senior leadership and staff positions by conducting executive-level courses of study and associated research dealing with the resource component of national power and its integration into national security

strategy for peace and war. The curriculum focuses on broad-based national security decision-making for senior policymakers in a dynamic world environment. The curriculum consists of courses presented in a balanced mix of seminars and lectures. The program emphasizes the case method, complemented by extensive student reading, written and oral presentations, classroom analysis, lectures by faculty members and prominent outside authorities, and a field study program. Location: Fort Lesley J. McNair, Washington, D.C. Length of Training: 10 months.

The Army War College (AWC) Resident: Prepares selected military officers and civilians for senior leadership responsibilities in a strategic environment during peace and war. AWC studies the role of landpower, as part of a joint or combined force, in support of the U.S. national military strategy. The curriculum emphasizes theory, concepts, systems, and the national security decision-making process. The AWC teaches through numerous case studies, exercises, and wargames. The student seminar group is the fundamental learning vehicle at the school. Location: Carlisle Barracks, Pennsylvania. Length of Training: 10 to 12 months.

ARMY CONGRESSIONAL FELLOWSHIP PROGRAM

AUDIENCE: Civilian employees at the GS/GM-13-15 level or above serving in career or schedule A appointments without time limitation.

LENGTH OF PROGRAM: 6 or 12 months

DESCRIPTION OF PROGRAM:

The Army Congressional Fellowship Program is designed to provide congressional training to top Army officers and civilians. This program supersedes all previous congressional fellowship programs and begins each year in August. Selected fellows will attend the Force Integration Course and participate in a Congressional Training Program. After completion of a one month classroom phase and orientation to HQDA, congressional fellows serve as staff assistants to Members of Congress. Fellows are typically given responsibility for drafting legislation, arranging congressional hearings, writing speeches and floor statements, and briefing Members for committee deliberations and floor debate.

SECTION 7 - IS FOR CORPS OF ENGINEERS ONLY

SECTION 7

ARMY SERVICE SCHOOLS AND DEFENSE MANAGEMENT EDUCATION AND TRAINING (DMET)

GENERAL: The courses in this section are listed by subject matter. Course descriptions, prerequisites, and length may be obtained from your local Training Officer.

SOURCE: Document for the Army Service Schools is the Army Formal Schools Catalog, DA Pamphlet 351-4 (31 Oct 95). The Defense Management Education and Training (DMET) Schools, information is contained in DOD 5010.16.c.

NOMINATION PROCEDURES

1. The USACE Professional Development Support Center (CEHR-P) receives the DOD quotas through the Structure Manning Decision Review (SMDR) process which is accomplished 3 years prior to the Fiscal Year the courses will be given.

2. The quotas received are published to all training POCs, and are issued on a first come, first serve basis; upon receipt of a DD 1556 (Request, Authorization, Agreement, Certification of Training and Reimbursement).

3. The employee's supervisor must submit a DD Form 1556 for all primary and space-available nominations to the Training Officer. All requirements must be processed through your Training Officer, who faxes them to (256) 895-7469, DSN 760-7469 or forwards them to CEHR-P-RG at the following address:

   Commander
   USACE
   Professional Development Support Center
   ATTN: CEHR-RG
   P.O. Box 1600
   Huntsville, Alabama 35807-4301

COST

There is no tuition charge for resident spaces for these classes, except Inspector General Auditor Training Institute. Organization sponsoring on-site classes will be charged a fee.

STUDENT NOTIFICATION

1. TRADOC Service Schools. DA Pamphlet 351-4 provides telephone numbers and general reporting instructions for each school. Training Officers and/or students should contact the school for additional information not mentioned in the DA Pamphlet.

2. Auditor School. A letter is sent to each student prior to course start date.

3. Inspector General Auditor Training Institute. A letter is sent to each student prior to course start date.

4. Judge Advocate General School. Forwards reporting instructions to students prior to course start date.

5. DMET Schools:

   a. Resident Courses. Students receive reporting instructions from the school before course start date.

   b. On-site Courses. Students receive reporting instructions from the hosting activity before course start date.

SCHEDULES

Schedules which include dates and locations may be obtained from your Training Officer in August/September for the next fiscal year.

MAJOR ARMY SERVICE SCHOOL SPONSORS	SCHOOL CODE
Academy of Health Sciences Ft. Sam Houston, Texas	28
Army Audit School Washington, DC	26
Army Chemical School Ft. McClellan, Alabama	21
Army Command and General Staff College Ft. Leavenworth, Kansas	31
Army Logistics Management College (ALMC) Ft. Lee, Virginia	6
Army Military Police School Ft Leonard Wood, Missouri 6547-5000	23
Army Quartermaster School Ft. Lee, Virginia	20
Army Safety Center Ft. Rucker, Alabama	18
Army Signal School Ft. Gordon, Georgia	30
Army Soldier Support, Finance School Ft. Jackson, South Carolina	24
Army Transportation Center and School Ft. Eustis, Vriginia	25
Defense Information School Ft. Benjamin Harrison, Indiana	19
Defense Mapping School Ft. Belvoir, Virginia	29
Inspector General Auditor Training Institute Ft. Belvoir, Virginia	34
The Judge Advocate General's School Charlottesville, Virginia	17
School of Military Packaging Technology (SMPT) Aberdeen Proving Ground, Maryland	7
Air Force Institute of Technology (AFIT) Wright Patterson AFB, Ohio	3
Air Training Command Lackland AFB, Texas	4
Air University Center for Professional Development Maxwell AFB, Alabama	15
Army Defense Ammunition Center and School Savanna, Illinois	8

MAJOR DMET SPONSORS **SCHOOL CODE**

Defense Institute Security Assistance Management (DISAM) 12
Wright Patterson AFB, Ohio

Defense Logistics Agency (DLA) 33
Civilian Personnel Service Support Office
Columbus, Ohio

Defense Resource Management Education Center 10
Monterey, California

Defense Security Institute (DSI) 9
Richmond, Virginia

Defense Systems Management College (DSMC) 2
Washington, DC

Information Resources Management College (IRMC) 1
Washington, DC

LIST OF COURSES

ADP

COURSE TITLE	COURSE NUMBER	CONTROL NUMBER	SCHOOL CODE
AIS STRATEGIES		459	1
DOD CORP INFO MGT	41BC7	451	1
INFO ENGR MGT		453	1

AUDITOR

COURSE TITLE	COURSE NUMBER	CONTROL NUMBER	SCHOOL CODE
ADV AUDIT TECHNIQUES		947	
AIC REPORT WRITING		941	26
AUDIT MGT		946	26
AUDIT SUPERVISOR		945	26
AUDIT SUPV WRITING		948	26
AUDITOR-IN-CHARGE		994	34
BASIC REPORT WRITING		943	26
EFFECTIVE AUD PRES		996	34
FRAUD AUDITING		995	34
FINANCIAL STATEMENTS		998	34
INTRO TO AUDITING		940	26
INTRO AUDITOR TRNG		992	34
INTRO FINANCIAL AUD		997	34
INTERMEDIATE AUDITOR		939	26
LEVEL II A		942	26
SENIOR AUDITOR		944	26

ENVIRONMENTAL

COURSE TITLE	COURSE NUMBER	CONTROL NUMBER	SCHOOL CODE
DEF HAZARD MAT/WASTE HDLG	56HWW	831	6
ENVIRONMENTAL PROCT/INVTGN		835	23
GEN TRANS HAZ MAT	56TPH	662	8
HAZARDOUS MAT HDLG	56HMH	653	7
HAZARD PROP MGT	56HPM	836	6
INSTL TRAF MGT HAZ	56THZ	663	8
PKG HAZARD MAT TRANS	56PHM	647	7
PKG HAZ MAT TRAN-REF	56RPH	654	7
TECH CHEM SURETY MAT	56TCS	665	8
TECH TRANS HAZ MAT	56THM	664	8

LIST OF COURSES (Continued)

LEGAL

COURSE TITLE	COURSE NUMBER	CONTROL NUMBER	SCHOOL CODE
ADMIN LAW MIL INSTL	37ALI	874	17
CONTRACT LITIGATION	3700	882	17
FEDERAL LITIGATION	37FLT	875	17
FED CRTS & BRDS LITI	37000	877	17
CONTRACT ATTORNEYS	37CAT	876	17
ETHICS COUNSELOR	37000	883	17
FED LABOR RELATIONS	37FLR	878	17
FISCAL LAW	41FSL	879	17
GOVT CONTR LAW SYMP	37CLS	880	17
PROCUREMENT FRAUD	37PCF	886	17

LOGISTICS

COURSE TITLE	COURSE NUMBER	CONTROL NUMBER	SCHOOL CODE
INDUS MAINT MGT	41BBV	483	3
INSTL LOG MGT	45ILM	805	6
LOGISTICS MGT DEV	45LMD	809	6

MANAGEMENT

COURSE TITLE	COURSE NUMBER	CONTROL NUMBER	SCHOOL CODE
ARMY MAINTENANCE MGT	45AMM	811	6
MANPOWER/FORCE MGMT	46MFM	830	6
SCTY ASST MGT-EX		690	12

PACKAGING, SHIPPING, AND STORAGE

COURSE TITLE	COURSE NUMBER	CONTROL NUMBER	SCHOOL CODE
BASIC PRESER & PKG	45BPP	643	7
DEF PACKAGING DESIGN	45DPD	649	7
DEF PKG LOG MGR	15PLM	650	7
DEF PKG/UTILIZATION	45DPU	646	7
HAZARDOUS MAT HDLG	56HMH	653	7
MARKING SHIPMT/STOR	45MSS	645	7
PKG HAZARD MAT TRANS	56PHM	647	7
PRES/INTERMED PROT	45000	651	7
VECH PROC SHIP/STOR	45VPS	652	7

PROCUREMENT/CONTRACTING

COURSE TITLE	COURSE NUMBER	CONTROL NUMBER	SCHOOL CODE
ADV COST/ECON ANAL	41JQI	491	3
CONTRACTING OFF REP	41BA9	814	6
EX REFRESH-PROG MGT	15BB8	469	2
INTRO UTIL CONTR	41000	522	4
INTRO/LIFE CYCL COST	41LCC	500	3

LIST OF COURSES (Continued)

PUBLIC AFFAIRS

COURSE TITLE	COURSE NUMBER	CONTROL NUMBER	SCHOOL CODE
BASIC JOURNALIST	52BJN	894	19
PUBLIC AFFAIRS OFF	52PAO	896	19
SR PUBLIC AFFAIRS	21SPA	899	19
THE EDITOR	52TED	900	19

RESOURCE MANAGEMENT

COURSE TITLE	COURSE NUMBER	CONTROL NUMBER	SCHOOL CODE
ADV MGT ACCT ANAL	42AMA	915	24
COMMER ACCTS ADMIN	42CAA	917	24
DEF RESOURCES MGT	41BAI	678	10
DISB OPERATIONS	42DBO	918	24
INTRO/LIFE CYCL COST	41LCC	500	3
MANPOWER & FORCE MGT	46MFM	830	6
MILITARY ACCOUNTING	42MAC	919	24
PPB&ES	42PPB	921	24
RESOURCE MGT BUDGET	42RMB	922	24
RESOURCE MGT TACT	42RMT	926	24
SCTY ASST MGT-FIN		691	12
TRAVEL ADMIN/ENTITLE	42TAE	927	24

SAFETY

COURSE TITLE	COURSE NUMBER	CONTROL NUMBER	SCHOOL CODE
RADIOLOGICAL SAFETY	59RAS	906	21
OPER RADIATION SAFE	590RS	907	21

SECURITY

COURSE TITLE	COURSE NUMBER	CONTROL NUMBER	SCHOOL CODE
BASIC INDUS SCTY SP		671	9
COMSEC CUSTODIAN	51SCC	973	30
DOD SECURITY SPEC	55DSS	677	9
HOSTAGE NEGOTIATIONS		949	23
INDUS SCTY EX SEM		669	9
INDUS SCTY MGT		670	9
INFO SCTY ORIEN		673	9
INFO SCTY MGT	55ISM	674	9
PERS SCTY INVES	55PSI	675	9
PHYS SEC/CRIME PREV	55CPC	910	23
SCTY ASST MGT-CONUS		694	12
SCTY ASST MGT-EX		690	12
SCTY ASST MGT-FIN		691	12
SCTY ASST MGT - FPE		697	12
SCTY ASST MGT - FTO		692	12
SCTY ASST MGT-OCONUS		695	12
SCTY ASST MGT - PROG		693	12
SCTY ASST MGT-TNG		696	12
COMBATING TERRORISM	55TMI	911	23

LIST OF COURSES (Continued)

TRANSPORTATION

COURSE TITLE	COURSE NUMBER	CONTROL NUMBER	SCHOOL CODE
GEN TRANS HAZ MAT	56TPH	662	8
HAZARDOUS MAT/WASTE HDLG	56HMH	831	6
HAZARD PROP MGT	56HPM	836	6
INSTL TRAF MGT HAZ	56THZ	663	8
ECH TRANS HAZ MAT	56THM	664	8

TRANSPORTATION MANAGEMENT

COURSE TITLE	COURSE NUMBER	CONTROL NUMBER	SCHOOL CODE
DEF ADV TRAFFIC MGT	45ATM	934	25
INSTL TRAFFIC MGT	45ITM	935	25
PASSENGER TRAVEL SPC	45PTS	937	25
TRAF MGT CORRDINATOR		683	25

MISCELLANEOUS

COURSE TITLE	COURSE NUMBER	CONTROL NUMBER	SCHOOL CODE
BASIC GEO SURVEYING	31BGS	971	29
COST EST FOR ENGRS	35CEE	838	6
DEC ANAL LOG	46DRL	840	6
DECISION ANAL	46DRA	839	6
LEAD TTT	48LDT	977	31
MOBIL & DEPLOYMENT	46MDP	938	31
ORG LEADERSHIP EX	12OLE	976	31
RISK ANALYSIS		841	6
TECH CHEM SURETY MAT	56TCS	665	8