US Army Corps
of Engineers
USACE Learning Center (ULC)

The Purple Book
and
PROSPECT
Training Needs Survey
FY2011

MANAGERS
AND SUPERVISORS
TRAINING HANDBOOK

MANAGERS AND SUPERVISORS TRAINING HANDBOOK

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SECTION 1 - HOW TO USE THIS HANDBOOK

IMPORTANT NOTICE: The USACE Learning Center (ULC) is proud to announce that the USACE Learning Network (ULN) is scheduled for release later this fiscal year. You need to be aware that the ULN will automate registration and enrollment processes for PROSPECT training. The ULN will benefit everyone, especially our customers by providing numerous courses of instruction and mandatory training to your desktop. To ensure a smooth transition to the ULN, the ULC team is developing Standard Operating Procedures and guidelines that we will coordinate and distribute soon. For FY11, the ULC will use the traditional method for determining FY11 class seat quotas. Once the ULN is fielded quota management will be a feature that will permit you to easily align and schedule students against the quotas.

We encourage you to use the Purple Book located on the ULC website at http://ulc.usace.army.mil. Using our website versus the hardcopy ensures you have current information on course times, dates, costs and locations.

Sections of the Handbook

This handbook is divided into 5 sections. Section 2 is newly subdivided: Section 2a provides our 2011 PROSPECT Projected FY Schedule; Section 2b provides each course purpose, description, and prerequisite(s) to guide you in selecting courses best adapted to individual needs. Please use Section 2a to find scheduled class sessions.

Section #	Title	Content
1	Registration Instructions And General Information	* How to Use this Handbook (FY11 Survey Instructions) * Training information to assist the supervisor in using the handbook effectively * Distance Learning (DL) – Your Training Solution * Continuing Education Credits (CEUs, PDHs, etc) * PROSPECT courses by Community of Practice (CoP)
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3	**Competitive Professional Development**	For Corps of Engineers Only
4	**Army Service Schools Defense Management Education and Training (DMET)**	For Corps of Engineers Only
5	**Civilian Education System (CES)**	For Corps of Engineers Only

Scheduling Requirements

We annually solicit class seats and your Training Coordinator distributes procedures for requesting quotas. Division, District, and other agency Training Coordinators consolidate requirements and submit them electronically to the USACE Learning Center (ULC).

Note to students: Contact your Training Coordinator before enrolling in a course. Contact your supervisor if you do not know your Training Coordinator.

Regarding our annual scheduling system, we use the priority system established by Headquarters, U.S. Army Corps of Engineers (HQUSACE) to request space allocations. See the following:

Priority	Description	Explanation
0	Mandatory Training	Mandated by regulation or higher headquarters.
1	Training, Knowledges, Skills and Abilities Needed now	Need to use training in the next 6 to 12 months; therefore the employee needs the training in the current FY.
2	Education – KSAs Needed	Need to use training in the next 12 to 24 months; therefore, the employee needs the training in the current or next training cycle.
3	Development – KSAs needed in the future	Need to use training in the future, more than 24 months away. Employee may take training in the current cycle but can defer training to a future cycle.

Onsite Training Sessions

Submit inquiries for onsite training sessions to the ULC by email or memo. Onsite sessions should have normal class sizes, e.g., a course with a class size of 35 students should have an onsite requirement of at least 25 students to effectively use required resources. Students enrolled in individual PROSPECT courses should not be included in onsite requests.

Tuition Billing System

The PROSPECT program operates on a "pay-as-you-go" tuition system. Course Managers calculate tuition by adding instructional and overhead costs (including ULC staff salaries), and dividing the total by the projected number of students.

For requested quotas, organizations pay tuition and per diem for their students to attend courses. Provided dates and locations do not change, your organization's student enrollments are a commitment to pay for allocated class seats. You must obligate funds when you request training spaces. **Payment for PROSPECT courses for Corps employees and private sector participants is mandatory via the IMPAC or other official credit card**. We strongly recommend that USACE approving Training Coordinators become IMPAC credit card holders with authority to purchase up to $2,500 minimum and that you identify an individual in your organization with authority to pay tuitions that exceed $2,500 (this often occurs with onsite courses).

Acceptable payment methods for onsite sessions also include Standard Form (SF) 182 and Military Interdepartmental Purchase Request (MIPR). Credit card payment by other agencies is also recommended. The SF 182 is the individual organizational requirement to document all training. Bills for tuitions paid by SF 182 will be processed monthly, following completion of training, through the USACE Finance Center.

Non-Federal Government Agencies

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

Annual Training Needs Survey

Using results from our annual survey, we determine the size and budget requirements of the annual program. Therefore, it is important that Training Coordinators input as many projected training requirements as possible during the survey.

Prerequisites

Always check the prerequisites in course descriptions. Supervisors are responsible for ensuring course enrollees or substitute enrollees meet all listed requirements. Students not meeting course prerequisites must request a prerequisite waiver to CEHR-ULC-PMO before taking the class.

Cancellations

Training Coordinators may cancel enrollments anytime up to 60 days prior to the start date of a class. (1) Cancellations received less than 60 days prior to the class start date for which no qualified standby student is available, and (2) no-shows will be billed for the applicable tuition. The Registrar's Office maintains a standby list for courses and most cancelled quotas can be filled if the cancellation is provided promptly. Your support in this policy assists us in maintaining the lowest possible tuition rates and in providing training to as many students as possible. Your credit card will not be charged unless the cancellation is within the 60-day no-cancellation window. In this case, the tuition charge will be processed and the registrar's office will notify you. **We will continue to honor late requests for cancellations without penalty based upon deployment, illness, and other emergencies.**

Questions

Refer all questions regarding the registration process **through local Training Coordinators** to one of the following:

Purpose	Telephone/FAX	E-Mail
Specific Course Information	TEL: 256-895-7425 or TEL: 256-895-7421 FAX: 256-895-7469	DLL-ULC-Registrar@usace.army.mil
Billing Information	TEL: 256-895-7422 FAX: 256-895-7469	DLL-ULC-Registrar@usace.army.mil
Technical Problems; logging in to TMIS, obtaining password or entering course information	TEL: 256-895-7471	Steve.L.Johnson@usace.army.mil

FAQ

You may view and download this current Purple Book, credit card procedures, and Frequently Asked Questions (FAQs) from the ULC website at http://ulc.usace.army.mil.

TRAINING INFORMATION

Laws and Regulations

* The Government Employees Training Act (PL 85-507), GETA.
* The Army Regulation, as AR 690, Chapter 410.
* Individual Division/District/Activity Procedures or Regulations.

Training Defined

Training - 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.

Official duties - the authorized duties that an employee is currently performing or those which he/she 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.

Principal Purpose of Training

The main purpose of training is to provide knowledge and skills needed in situations such as:

* Agency mission or program changes.
* New technology.
* New work assignments.
* Improvement in present performance.
* Future staffing needs.
* Development of unavailable skills.
* Requirements for journeyman status in an apprenticeship role.
* Orientation for new employees.
* Adult basic education.

Training Facilities

The Government Employees Training Act (GETA) provides for training of employees through either government or nongovernmental facilities. However, training employees through nongovernmental 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.

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.

Payment of Training Expenses

GETA authorizes the head of each department to do the following:

* 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 nongovernmental facilities for each period of training.

* 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.

Responsibility for Training

Supervisors/managers are responsible for training their subordinates. If an employee fails a job assignment because of the lack of training, the supervisor is held responsible, not the employee. Supervisors are responsible for asking superiors, Activity Career Program Managers (ACPMs) or personnel technicians for assistance needed. Each activity should encourage self-development of employees and recognize performance improvements that result from training.

Employees also have a basic responsibility for self-development. Employees are encouraged to show initiative regarding training opportunities and to demonstrate improvements resulting from training. When employees are selected for training, they are obligated to give their best thought and effort to that training.

Selection for Training

Agencies must establish procedures necessary to ensure:

* 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.

* 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.

Consider factors such as the following when selecting employees for training:

* Employees' need for training.
* Potential of employees for advancement.
* Extent to which employees' knowledge, skill, attitudes, or performance is likely to improve by training.
* Ability of employees to share learning with others upon returning to the job.
* Length of time and degree to which the agency expects to benefit from the employees' improved knowledge, skills, attitudes, and performance.
* Training opportunities previously afforded employees by the agency.
* Employees' own interest in and efforts to improve their work.

Training Policy

General training policy is found on the PERMISS section of http://cpol.army.mil or on the CPAC website.

DISTANCE LEARNING (DL) - YOUR TRAINING SOLUTION

Introduction

Training and education are investments in readiness. The goal to deliver quality education and training to the right people, at the right time, and at the right place can only be achieved with the application of appropriate technologies.

In an effort to maintain readiness, stay within reducing budgets and continue to meet future operational and compliance requirements, it is essential to exploit all available learning strategies and technologies. Classroom instruction, distance learning, e-Learning, web-based, computer-based instruction, computer-based training, digital training and interactive multimedia instruction technologies are all components in our efforts to reengineer training and education.

Under the guidance of the USACE Human Resources (HR) Directorate, the US Army Corps of Engineers Learning Center (ULC), as a team, has developed a planning strategy that utilizes a combination of all these technologies to provide more technically competent personnel in essential areas in less time and a workforce that is more informed.

The establishment of the USACE Learning Network (ULN) provides a platform to not only enroll students and track training throughout USACE but is also ideally suited to provide essential technologies to launch a wide range of training courses via the web.

The ULN provides Interactive Multimedia Instruction or IMI training opportunities that are designed to have measureable results that integrate the interactivity of the live classroom instruction with the convenience of the on line self paced experience.

Training is valuable, and training designed to meet your requirements and those of the student is of extreme value. The combination of quality training at the right time and in the right place is PRICELESS.

You will find that the ULN will be your one stop shop for training at all levels. From lock operator to park ranger, to professional engineer, to financial manager; we cover a wide and varied range of professionally presented and documented training.

The ULN is open not only to Corps of Engineers personnel, but is accessible to, and meets the ever growing needs of the Army, Navy, Air Force, Marines and Coast Guard. Not to mention, other federal and state agencies and contractors everywhere.

We design, build, and deliver the very best on line training available anywhere. If you do not find a distance learning course that meets your current needs you are encouraged to contact Team ULC to see if it is on the schedule to be presented at a later date or if your training should be considered to be placed on line.

To contact the ULN members of Team ULC contact the ULN Help Desk at: ulc.uln.support@usace.army.mil or call 256-895-7730.

LET US PUT SOMETHING ON LINE FOR YOU.

Procedures for Purchasing DL Courses

USACE and other agencies purchasing a distance learning course must forward funds to the U.S. Army Engineering and Support Center, Huntsville, to cover the purchase before course materials are shipped to the agency. The method of reimbursement for DL products is via a government issued credit card. A credit card form will be emailed to the requesting agency.

CONTINUING EDUCATION CREDITS

General Information

Many state and other certifying and licensing bodies require their members to complete a number of continuing education credits to maintain licenses and certification.

Most professions do not establish national criteria but most individual states and certifying or licensing bodies generally do. Each state, licensing body or certifying body determines its requirements and the training qualified for continuing education credits. As a result, there is no guarantee that a state, certifying body or licensing body will accept other training for continuing education credit. However the ULC does maintain a rigorous certification/registration program; many PROSPECT courses provide continuing education credits through five national professional organizations; this fact should positively influence decisions by state, certifying body or licensing body.

The following professional organizations authorize the ULC to issue the indicated continuing education credits in PROSPECT courses:

Organization	Credit
American Institute of Architects (**AIA**)	**LU** (Learning Unit)
American Institute of Certified Planners (**AICP**)	**CM** (Certified Maintenance) (hour)
International Association for Continuing Education and Training (**IACET**)	**CEU** (Continuing Education Unit)
National Society for Professional Engineers (**NSPE**)	**PDH** (Professional Development Hour)
Project Management Institute (**PMI**)	**PDU** (Professional Development Unit)

This year, the ULC plans to become an authorized provider with the Leadership in Energy and Environmental Design (LEED) professional credentialing program, a third-party credentialing organization under the U.S. Green Building Council (USGBC). To learn more about the USGBC and LEED certification, go to http://www.usgbc.org/.

The following summarizes PROSPECT courses authorized continuing education credits for FY11. Respective course descriptions in Section 2b also identify these credits. Additionally, PROSPECT course certificates indicate the type and number of credits earned. Managers and employees should consider these crediting courses as a source of training to meet continuing education requirements when developing Individual Development Plans (IDPs).

2011 COURSES APPROVED FOR CEUS

Title	Crs#	CEU	LU	PDH	PDU	CM
A-E CONTRACTING	4	3.1	34	31		
ADV REAL PROPERTY MASTER PLANNING	952	2.9	29	29		29
ADVANCED STEADY FLOW WITH HEC-RAS	67	3.1		31		
ADVANCED STREAMBANK PROTECTION	394	3.2		32		
ARCHITECTURAL HARDWARE-QV	3	2.8	28	28		
BASIC PM IN USACE	355	2.3	23	23	23	
BUDGET TRAINING	254	3.3				
CE CONTRACT LAW	342	2.8		28		
CERCLA/RCRA PROCESS	356	2.1		21		
CIVIL DESIGN FOR PLANNING	218	3.0	30	30		
CIVIL WORKS PROGRAMMING PROCESS	358	3.1				
COASTAL ECOLOGY	263	2.6				
COASTAL ENGINEERING	13	2.7		27		
COASTAL PROJECT PLANNING	11	2.8		28		
CONCRETE ENGINEERING TECHNOLOGY	22	2.5	24	25		
CONCRETE FUNDAMENTALS	21	2.4	24			
CONST CONTRACT ADMIN	366	2.5	25	25		
CONST QUALITY MGT	29	1.5	15	15		
CONSTRUCTION SCHEDULE PERFORMANCE MANAGEMENT	80	2.1		21		
CONTRACTING OVERVIEW	742		21			
COST ESTIMATING BASICS	181	3.1				
COST REIMBURSEMENT	1	2.5		25		
CQM FOR CONTRACTORS	784	1.3	13	13		
CQM-CD ROM	795		10			
DAM SAFETY	28	2.6		26		
DESIGN BUILD CONSTRUCTION	425	3.1		31		
DISTRICT OFFICER INTRODUCTORY COURSE	334	3.4				
DREDGE COST ESTIMATING	118	2.8		28		
DREDGING FUNDAMENTALS	333	2.5		25		
DREDGING: CONTRACT ADMINISTRATION	211	1.8		18		
E&D QUALITY MANAGEMENT	208	1.7	17	17		
EARLY CONTRACTOR INVOLVEMENT (ECI)	344	3.0				
EARTHWORK CONSTRUCTION—QV	40	2.4				
ELECTRICAL DESIGN I	373	3.3		33		
ELECTRICAL DESIGN II	374	3.3		33		
ELECTRICAL EXTERIOR DESIGN	90	3.3		33		
ELECTRICAL QUALITY VERIFICATION	42	3.0	30	30		
ELECTRONIC SECURITY SYS (ESS) DESIGN	360	3.2		32		
ENV REG PRACTICAL APPLICATION	398	2.2		22		
ENV REMED TECH-CONTAINMENT	337	1.6		16		
ENV REMED TECH-SUBSURFACE	371	1.6		16		
ENV REMEDIATION TECHNOLOGIES	395	2.8		28		
ENVIRONMENTAL IMPACT ASSESSMENT	169		31			
ENVIRONMENTAL LAWS & REGULATIONS	170		31			
EST FOR CONST MODS	180	3.4	34	34		
FEDERAL FACILITY PLANNING AND RELOCATION	953		18			
FINANCE AND ACCOUNTING	12	3.3				
FIRE PROTECTION ENGINEERING (BASIC)	6	3.4	34			
FUNDAMENTALS OF WETLANDS ECOLOGY	272	2.3	23			
GENERAL CONSTRUCTION-QV	54	3.3	33	33		
GIS INTRODUCTION	205	2.2		22		
GPS FOR GIS APPLICATIONS	187	2.8		28		

Title	Crs#	CEU	LU	PDH	PDU	CM
HISTORIC STRUCTURES I	392	2.8	28	28		
HVAC CONTROL SYSTEMS: DESIGN & QV	340	3.1		31		
HVAC CONTROL SYSTEMS: O&M	246	3.1				
HVAC DESIGN: BASIC	391	3.3		33		
HVAC SYSTEMS COMMISSIONING	327	3.0		30		
HVAC SYSTEMS TA&B-QV	68	3.0		30		
HW MANIFEST/DOT CERTIFICATION	223	3.4				
HYDROGRAPHIC SURVEY TECHNIQUES	56	3.0		30		
INTERPRETIVE SERVICES	72	2.0				
MAINTENANCE AND REHABILITATION OF PAVEMENTS	50	2.9		29		
MECHANICAL—QV	74	3.2		32		
MII ADVANCED	312	2.8	28	28		
MII BASIC	305		36			
NATIONAL ELECTRICAL CODE	78	3.0		30		
NEG CONST CONT MODS	368	2.5	25	25		
O&M CONTRACTS	119	2.6		26		
O&M CONTRACTS ADV	318	1.8		18		
OMBIL APPLICATIONS FOR MANAGERS	160	2.3		23		
PAINT COATINGS AND QA	84	3.1	31	31		
PLANNING FOR ECOSYSTEM RESTORATION	348	3.1				
PROJECT MANAGEMENT - MIL PROG	88	3.1	31	31	31	
RE ACQUISITION 101	79	3.0				
RE INLEASING	102	3.0				
REAL PROPERTY ASSET MANAGEMENT	286	2.7				
REAL PROPERTY MASTER PLANNING	75	3.0	30	30		30
REAL PROPERTY UTILIZATION	214		25			
REGULATORY III	325	2.9		29		
RISK ANALYSIS FOR FLOOD RISK MANAGEMENT	209	2.6		26		
RISK ANALYSIS-WRP&M	349	3.1				
RP MASTER PLNG VISUALIZATION TECHNIQUES	948		31			31
SCHEDULING BASICS FOR PROJECTS	143	1.8		18	18	
SPECS FOR CONSTRUCTION CONTRACTS	185		34			
STREAMBANK EROSION & PROTECTION	285	3.3				
SURVEY I: BASIC PRINCIPLES	295	3.0		30		
SURVEY II: CONSTRUCTION	339	2.1		21		
SURVEY III: MAPPING	296	2.9		29		
SURVEY IV : GPS	203	2.9		29		
UNSTEADY FLOW USING HEC-RAS	188	3.2				
VALUE ENGINEERING	110	3.2	32	32		
VISITOR ASSIST MGT & POL	324	1.8				
VISITOR ASSIST NRM	147	3.2				
WATER AND THE WATERSHED	164	2.7				
WELDING—QUALITY VERIFICATION	116	2.9		29		
WETLANDS EVALUATION PROCEDURES	273	2.2		22		

COURSES SUPPORTING USACE COMMUNITIES OF PRACTICE (COPS)

The Corp's Communities and sub-Communities of Practice (CoPs/sub-CoPs) ensure that employees develop and maintain technical competencies. CoP/sub-CoP leaders designate proponents (hence PROSPECT – Proponent Sponsored Engineer Corps Training), who determine course curriculum based on results from ULC supported surveys and the National Technical Competency Study (NTCS). This link to proponents allows PROSPECT to serve as a conduit for individual and organizational learning. A list of CoPs, Sub-CoPs and applicable courses follows.

PROSPECT COURSES AND USACE COMMUNITIES OF PRACTICE

CoP	Sub-CoP	Crs #	PROSPECT Course Title
Planning		218	Civil Design Planning
		11	Coastal Project Planning
		345	Nonstructural Measure for Flood Risk
		57	Hydrologic Engineering for Planning
		315	Dev Prog Partnership Agreement
		86	PCC1 Civil Works Orientation
		77	PCC2 Planning Principles Procedures
		408	PCC3 Environ Considerations in Planning
		270	PCC4 Economic Analysis -- WRP
		409	PCC5 H&H Considerations In Planning
		406	PCC6 Plan Formulation
		407	PCC7 Public Involv & Team Planning
		405	Planning Process
		75	Real Property Master Planning
		349	Risk Analysis -- WRP&M
		214	Space Utilization
PM/PgM		355	Basic PM in USACE
		120	CE Commanders Course
		10	CW Program Development
		358	CW Programming Process
		334	District Officer Introductory Course
		88	Project Management -- Mil Prog
		383	Project Teambuilding
		91	Public Involvement Communication
Engineering & Construction	Architecture	3	Architectural Hardware--QV
		392	Historic Structures I
	Budgeting	118	Dredge Cost Estimating
	CAD/DIM	51	Building Information Modeling (BIM)
	Civil Engineering	218	Civil Design Planning
		185	Specs for Construction Contracts
	Coastal Engineering	13	Coastal Eng Proj/Des
	Construction Management	4	A-E Contracting
		212	Area Office University CM 101
		21	Concrete Fundamentals
		257	Concrete Maintenance & Repair
		366	Const Contr Admin
		29	Const Quality Mgt
		80	Constr Schedule Perf Mgt
		50	Constr & Rehab of Flex Pave
		1	Cost Reimbursement
		784	CQM for Contractors
		795	CQM--CD Rom
		425	Design-Build Construction
		208	E&D Quality Management
		344	Early Contractor Involvement (ECI)
		40	Earthwork--QV
		180	Est for Constr Mods
		54	General Construction -- QV
		340	HVAC Control Systems: Design & QV

		246	HVAC Control Systems: O&M
		391	HVAC Design: Basic
		327	HVAC Systems Commissioning
		68	HVAC Systems TA&B - QV
		74	Mechanical -- QV
		368	Neg Constr Cont Mods
		115	Pavement Evaluation, Maint & Repair
		244	Sustainability and LEED
	Cost Engineering	24	Adv CW Cost Engineering
		181	Cost Est Basics
		220	Cost Risk Analysis Basic
		305	MII Basic
		312	MII Advanced
	Dam Safety	28	Dam Safety
	Electrical& Electronic Engrg	106	Diesel Generators
		373	Electrical Design I
		374	Electrical Design II
		90	Electrical Exterior Design
		42	Electrical--QV
		6	Fire Protection
		78	National Electrical Code
	Environmental Engineering	439	Const Wet Hab Miti
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		316	HEC-FDA with Risk
		161	Hydro Anal for Ecosystem Rest
		152	Hydro Data Mgt/HEC-DSSVUE
		155	Real Time Water Controls
		98	Reservoir Sys Anal
		209	Risk-Based Analysis

		122	Sediment Transport
		58	Stat Methods Hydro
		285	Streambank Eros/Prot
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		177	Water Quality Management
	Material Engineering	357	Adv Pavement Design
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		9	Corrosion Control
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		160	OMBIL for Managers
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		322	Regulatory IIA
		323	Regulatory IIB
		325	Regulatory III
		140	Regulatory IV
		137	Regulatory V
		436	Regulatory VII
		324	Visitor Assist Mgt & Pol
		147	Visitor Assist NRM
		750	Visitor Surveys
		239	Wetland Mitigation Banking
Environmental		356	CERCLA/RCRA Process
		443	Clean Air Act
		263	Coastal Ecology
		299	Cultural Resources
		168	Ecological Resources: Inventory & Eval
		280	Ecosystem Restoration
		398	Env Reg Practical Application
		395	Env Remediation Technologies
		225	Env Sampling
		169	Environmental Impact Assessment
		170	Environmental Laws & Regulations
		198	Environmental Writing
		272	Fundamentals of Wetlands Ecology
		141	HTRW Construction Inspection
		223	HW Manifest/DOT Certification
		429	HW Manifesting/DOT Certification

		440	Hydro Const Miti Wet
		348	Planning for Ecosystem Restoration
		260	Proj Mgt -- Env Remediation
		444	QRP/Ordnance Expl Recog & Safety
		430	Rad Waste Transport/DOT Recertification
		441	Radioactive Waste Transport
		281	Riparian Zone Ecology/Restoration/Mgt
		164	Water & the Watershed
		239	Wetland Mitigation Banking
		423	Wetland Plant Identification (SE)
		426	Wetland River Func/Ecol
		276	Wetlands Development & Restoration
		192	Wetlands Stream Ecology
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		252	1391 Processor
		952	Adv Real Property Master Planning
		999	DPW Program Management
		988	DPW PWBOC
		989	DPW PWMOC
		972	DPW QA
		101	Economic Analysis MILCON
		991	JOC Advanced
		990	JOC Basic
		974	PBSC
		954	Purchasing Green
		978	QAE/PI
		286	Real Property Management
		75	Real Property Master Planning
		326	Real Property Master Planning Skills
		150	Real Property Skills
		948	RP Master Planning Visualization Techn
		214	Space Utilization
	Information Technology	928	Adv SQL for IFS
		933	CMS
		981	DPW Budget/JCA
		983	DPW Work Estimating
		980	DPW Work Reception
		971	IFS Introduction
		984	IT for Managers
		975	SQL for IFS
Interagency & International Svcs			NONE
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		121	RE Acquisition 201
		76	RE Disposals 202
		102	RE Inleasing
		7	RE Mgt & Disposal 101
		73	RE Mgt & Outgrants 201
		144	Project Mgt & Ctrl
		193	Real Estate Re-location Asst
Research & Development			NONE
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		306	Conflict Mgt & Disp Res
		179	Trial Attorney

Human Resources		34	Leading In a Learning Organization
Corporate Information			NONE
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		12	Finance and Accounting
	Budgeting		NONE
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		32	Crane Safety
		175	Dive Safety Administration
		397	Dive Safety Admin Refresher
		259	Diving Refresher
		81	Floating Plant Safety
		236	Safety Mgt for Supervisors & Leaders
		215	USACE 30 Hr Construction Safety
		63	USACE 30 Hr Opr & Maint Safety
		35	Working Diver
Logistics			NONE
Public Affairs			
Small and Disadvantaged Business			NONE
Security & Law Enforcement			NONE
EEO		822	Prevention of Sexual Harassment WBT
EIG			NONE
Internal Review			NONE
Emergency Management		158	Flood Control & Coastal Emergencies

SECTION 2A - PROSPECT PROGRAM SCHEDULE

PROSPECT Projected FY2011 Schedule

Starting on the next page is a complete list of our scheduled courses/sessions for FY11; sorted alphabetically by title. The list also indicates the course control number, class size, continuing education credits (CEUs, PDUs, etc) if applicable; tuition amounts and proposed locations and dates of each course and session listed. The Registrar will provide information at a later time if the location indicates "TBD" (to be determined) and the dates are blank.

Corps Regional Concept

The regional concept for scheduling locations of the classroom courses includes four regions: Western, Central, Northeastern and Southeastern. These regional centers are shown on the following map:

Most course sessions surveyed occur at regional centers. Exceptions include: 1) Site dependent courses, approximately 1/3 of the program (i.e., Vicksburg, Mississippi (ERDC); Davis, California (HEC); and Duck, North Carolina); and 2) Courses with a large number of applicants from a city other than a designated regional center, (e.g., Omaha, Nebraska in the Central Region).

The ULC gives priority consideration to placement of classes at the Bevill Center in Huntsville, Alabama, the Corps' training facility.

We encourage you to select a session closest to your assigned work location. Cooperation of all parties - proponents, instructors, Training Coordinators, managers, and students - will secure the benefits of lower travel costs through regional scheduling.

PROPONENT SPONSORED ENGINEER CORPS TRAINING (PROSPECT)

GENERAL 2B-1
ADDRESS 2B-1
COST 2B-1
STUDENT NOTIFICATION 2B-1

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(3) ARCHITECTURAL HARDWARE-QV
(4) A-E CONTRACTING
(6) FIRE PROTECTION ENGINEERING (BASIC)
(7) RE MGT AND DISPOSAL 101
(9) CORROSION CONTROL
(10) CW PROGRAM DEVELOPMENT
(11) COASTAL PROJECT PLANNING
(12) FINANCE AND ACCOUNTING
(13) COASTAL ENGINEERING
(18) CAREER PROGRAM MANAGER (CP-18) WORKSHOP
(21) CONCRETE FUNDAMENTALS
(22) CONCRETE ENGINEERING TECHNOLOGY
(23) CONCRETE MATERIALS
(24) CIVIL WORKS COST ENGINEERING
(27) SEISMIC DESIGN BUILDINGS
(28) DAM SAFETY
(29) CONST QUALITY MGT
(32) CRANE SAFETY
(33) FIRE EXTINGUISHING SYSTEMS DESIGN
(34) LEADING IN A LEARNING ORGANIZATION
(35) WORKING DIVER
(40) EARTHWORK CONSTRUCTION—QV
(42) ELECTRICAL QUALITY VERIFICATION
(50) MAINTENANCE AND REHABILITATION OF PAVEMENTS
(51) BUILDING INFORMATION MODELING
(54) GENERAL CONSTRUCTION-QV
(56) HYDROGRAPHIC SURVEY TECHNIQUES
(57) HYDROLOGIC ENGINEERING FOR NON-ENGRS
(58) STATISTICAL METHODS IN HYDROLOGY
(63) USACE 30-HR OPERATIONAL AND MAINTENANCE SAFETY
(67) ADVANCED STEADY FLOW WITH HEC-RAS
(68) HVAC SYSTEMS TA&B-QV
(70) INTERPRETIVE SERVICES FOR MGRS, SUPV & TEAM LDERS
(72) INTERPRETIVE SERVICES
(73) RE MGT AND OUTGRANTS 201
(74) MECHANICAL—QV
(75) REAL PROPERTY MASTER PLANNING
(76) RE DISPOSALS 202
(77) PCC2 PLANNING PRINCIPLES AND PROCEDURES
(78) NATIONAL ELECTRICAL CODE
(79) RE ACQUISITION 101
(80) CONSTRUCTION SCHEDULE PERFORMANCE MANAGEMENT
(81) FLOATING PLANT SAFETY
(84) PAINT COATINGS AND QA
(86) PCC1 CIVIL WORKS ORIENTATION
(88) PROJECT MANAGEMENT - MIL PROG
(90) ELECTRICAL EXTERIOR DESIGN
(91) PUBLIC INVOLVEMENT - COMMUNICATION
(98) RESERVOIR SYSTEMS ANALYSIS WITH HEC-RESSIM
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(101) ECONOMIC ANALYSIS MILCON
(102) RE INLEASING
(106) DIESEL GENERATORS: BASICS/TESTING
(110) VALUE ENGINEERING
(113) SOIL STRUC INTERACTION
(114) STEADY FLOW WITH HEC-RAS
(115) PAVEMENT EVALUATION DESIGN
(116) WELDING—QUALITY VERIFICATION
(118) DREDGE COST ESTIMATING
(119) O&M CONTRACTS
(120) CE COMMANDERS COURSE
(121) RE ACQUISITION 201
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(123) FLOOD FREQUENCY ANALYSIS
(126) BUILDING AIR BARRIERS AND PRESSURE TESTING
(137) REGULATORY V
(139) WATER QUALITY MODELING WITH HEC-RAS
(140) REGULATORY IV
(141) HTRW CONSTRUCTION INSPECTION
(143) SCHEDULING BASICS FOR PROJECTS
(144) RE PROJECT MANAGEMENT & CONTROL (RE PM&C)
(147) VISITOR ASSIST NRM
(150) REAL PROPERTY SKILLS
(152) HYDRO DATA MANAGEMENT WITH HEC-DSSVUE
(155) CWMS MODELING FOR WATER MANAGEMENT
(158) FLOOD CONTROL & COASTAL EMER
(160) OMBIL APPLICATIONS FOR MANAGERS
(161) HYDROLOGIC ANALYSIS FOR ECOSYSTEM RESTORATION
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(177) WATER QUALITY MANAGEMENT
(178) HYDROLOGIC MODELING WITH HEC-HMS
(179) TRIAL ATTORNEY
(180) EST FOR CONST MODS
(181) COST ESTIMATING BASICS
(185) SPECS FOR CONSTRUCTION CONTRACTS
(187) GPS FOR GIS APPLICATIONS
(188) UNSTEADY FLOW USING HEC-RAS
(192) WETLAND STREAM ECOLOGY
(193) RE RELOCATION

(196) REMOTE SENSING FUNDAMENTALS
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(209) RISK ANALYSIS FOR FLOOD RISK MANAGEMENT
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(212) AREA OFFICE UNIVERSITY (CM101)
(214) REAL PROPERTY UTILIZATION
(215) USACE 30 HR CONSTRUCTION SAFETY
(217) GROUTING FUNDAMENTALS AND CURRENT PRACTICE
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(219) HYDROLOGIC ENGR APPLICATIONS FOR GIS
(220) COST RISK ANALYSIS BASIC
(223) HW MANIFEST/DOT CERTIFICATION
(224) CUSTOMER RELATIONSHIP MANAGEMENT
(236) SAFETY MANAGEMENT FOR SUPV AND LDRS
(239) WETLAND MITIGATION BANKING
(242) WETLAND RIVERINE FUNCTIONS ADVANCED
(244) SUSTAINABILITY AND LEED
(245) OPERATIONS MANAGEMENT
(246) HVAC CONTROL SYSTEMS: O&M
(247) SEISMIC STABILITY OF EARTH DAMS
(248) SHEAR STRENGTH
(250) SEEPAGE AND PIPING
(251) APPLICATION OF ENGINEERING GEOLOGY
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(254) BUDGET TRAINING
(257) CONCRETE MAINTENANCE & REPAIR
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(273) WETLANDS EVALUATION PROCEDURES
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(317) MASONRY STRUCTURES DESIGN
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(320) H&H FOR DAM SAFETY STUDIES
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(323) REGULATORY IIB
(324) VISITOR ASSIST MGT & POL
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(327) HVAC SYSTEMS COMMISSIONING
(333) DREDGING FUNDAMENTALS
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(360) ELECTRONIC SECURITY SYS (ESS) DESIGN
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(368) NEG CONST CONT MODS
(369) ADVANCED APPLICATIONS OF HEC-HMS
(370) REGULATORY IIC
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(373) ELECTRICAL DESIGN I
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(376) MANAGEMENT OF HYDROPOWER-O&M
(383) PROJECT TEAMBUILDING
(391) HVAC DESIGN: BASIC
(392) HISTORIC STRUCTURES I
(394) ADVANCED STREAMBANK PROTECTION
(395) ENV REMEDIATION TECHNOLOGIES
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WETLANDS EVALUATION PROCEDURES (273)
WORKING DIVER (35)

PROSPECT COURSES/WORKSHOPS ADDED TO INVENTORY

(126) Building Air Barriers and Pressure Testing
(139) Water Quality Modeling with HEC-RAS
(212) Area Office University (CM101)
(224) Customer Relationship
(242) Wetland Riverine Advanced
(901) DPW-Bus. Op and Integt Mgnt
(902) DPW-Engineer Div Management
(903) DPW Operations and Maint Mgmt
(370) Reg IIC
(415) USACE General Officer/SES Course

PROSPECT COURSES DELETED FROM INVENTORY

(085) Const & Rehab of Rigid Pave
(102) RE Inleasing
(108) Groundwater Modeling
(124) Groundwater Hydrology
(156) RCRA HW
(193) RE Relocation
(260) Project Management-Environmental Remediation
(279) Prob In Geotech Engr
(300) Advanced Reservoir Modeling With HEC-RESSIM
(332) Concrete Construction Inspection Certification
(443) Clean Air Act
(778) Floating Plant Safety
(971) IFS Introduction

SECTION 2B - PROPONENT-SPONSORED ENGINEER CORPS TRAINING (PROSPECT)

General

The courses in this section meet Corps of Engineers and other government agency training needs. Corps and other government employees from HQUSACE, IMCOM/ACSIM, Corps divisions, districts, laboratories and contractors teach these courses. PROSPECT courses provide formal learning opportunities in support of the USACE Communities of Practices (CoPs).

Contact Information

Director
USACE Learning Center (ULC)
ATTN: CEHR-ULC-PMO (Registrar)
PO Box 1600
Huntsville, Alabama 35807-4301
Telephone: (256) 895-7425/7421
FAX: (256) 895-7469

Cost

Your activity will pay for tuition, travel and per diem.

Student Notification

The Registrar will transmit the Student Reporting Instructions/Student Information Sheets electronically to the Training Coordinator approximately 60 days before the month when the class session will occur. This instruction/sheet explains hotel and classroom accommodations and all other pertinent course information.

Two summary lists to help you find courses in course descriptions:

Summary of Courses by course control number: A summary of our PROSPECT courses arranged numerically, by course number. Use this list if you know the course number; looking for the course title.

Summary of Courses listed by course title: The same PROSPECT course content as the numerical list but arranged alphabetically, by course title. Use this list if you know the course title; looking for the course number.

Course Descriptions

A list of our course descriptions arranged alphabetically by course title. Course descriptions provide course purpose, description, prerequisites, continuing education credits, tuition and course length. Supervisors are required to check the prerequisites in course descriptions to ensure course enrollees or substitute enrollees meet all listed requirements. Students not meeting course prerequisites must obtain a prerequisite waiver from CEHR-ULC-PMO before taking the class.

1391 PREPARATION

253 Length: 36 Hours 5413901A

Tuition: $1510

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.

Topics covered include: (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/ACOM/ASCC/DRU/HQUSACE/MSC/USAISEC/HQIMCOM/HQDA review, certification and approval process; and (g) how to market a project. This course includes an overview of the automated applications that support the military construction process.

Prerequisites.

(a) Personnel at all levels, (installation, Region, ACOM/ASCC/DRU, USACE district, USACE division, HQUSACE, HQIMCOM, 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.

1391 PROCESSOR

252 Length: 36 Hours 5413P01A

Tuition: $1460

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.)

A-E CONTRACTING

4 Length: 36 Hours 41AEP01A
CEUs: 3.1 PDHs: 31 LUs: 34
Tuition: $1140

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.

ADV REAL PROPERTY MASTER PLANNING

952 Length: 36 Hours 49ARP01A
CEUs: 2.9 PDHs: 29 LUs: 29 CMs: 29
Tuition: $2250

Purpose.

This course provides planners the collaborative planning skills needed to conduct/lead complex master planning efforts such as sustainable planning area development planning and form-base coding. With the update to AR 210-20, this class provides the details how to implement the various principles set forth in the regulation. It also provides an overview of comprehensive planning techniques needed to integrate various planning considerations that must be comprehensively considered in the development of Army as well as other DoD and Federal installations/communities.

Description.

Through an intensive hands-on workshop, students will use a planning charette technique to develop an Area Development Plan for a real world planning problem at an installation. Students will learn how to define a form-based code for installation development and implement the code requirements. Through the exercise, students will be faced with various planning considerations and will be required to holistically integrate these issues into a comprehensive solution that meets mission requirements and provides for a quality urban design solution that is sustainable and compatible to the installation's vision for real property development. Students will reference several planning text books and use these applications to learn how to apply these planning principles.

Prerequisites.

Attendees should be engaged in real property master planning and management activities. Participants will be required to have a fundamental knowledge of master planning. Incumbent will be required to use a PC and be able to insert pictures and graphics and prepare a report. Further, the students will be required to participate in field exercise where they will apply real world appliation to planning principles presented. This course is open to the general public.

Notes.

Students should be advised this is studio based class that requires extensive participation by students in groups. Work assignments may require class participants to work past traditional class schedule 8-5, or if required visit site conditions in the city or community where the project is assigned. This class is accredited by the American Institute of Certified Planners. Students are awarded 29 certification maintenance credits upon completion.

ADVANCED APPLICATIONS OF HEC-HMS

369 Length: 36 Hours 35AHC01A

Tuition: $2930

Purpose.

This course provides instruction in the use of the Corps' Hydrologic Modeling System (HEC-HMS) for ecosystem restoration, flood damage reduction, forecasting, and navigation studies where advanced simulation strategies are required. Workshops are used to provide hands-on reinforcement of scientific and engineering principles presented in lecture. Students will be prepared to work on more complicated studies after completing the course.

Description.

The course covers advanced hydrologic analysis methods. Students are introduced to continuous simulation techniques including soil moisture modeling and parameter estimation from soil databases. Approaches are provided for simulating interior ponds and their interaction with main channel flow. Snow accumulation and melt modeling is conducted using a temperature index approach. Distributed modeling with the ModClark approach is included with attention to using GIS to develop the complex data that is required in gridded hydrology. The week ends with approaches to representing difficult urban hydraulic scenarios. Teaching of scientific and engineering principles of advanced hydrologic studies is integrated with increasing capability to use HEC-HMS as a tool.

Prerequisites.

Nominees must have a working knowledge of hydrologic processes and how they are represented in HEC-HMS. Students should have taken Course 178, Hydrologic Modeling with HEC-HMS, or have equivalent work 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.

ADVANCED STEADY FLOW WITH HEC-RAS

67 Length: 36 Hours 35AH201A

CEUs: 3.1 PDHs: 31

Tuition: $2760

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-7 or above. Students must be experienced engineers who have attended Steady Flow with HEC-RAS (Crs. No. 114). Participants must be in positions where they are currently engaged in using HEC-RAS in hydraulic investigations.

ADVANCED STREAMBANK PROTECTION

394 Length: 36 Hours 35ASP01A
CEUs: 3.2 PDHs: 32
Tuition: $2130

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 50 mile radius of Grenada, MS. 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 completed 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.

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.

APPLICATION OF ENGINEERING GEOLOGY

251 Length: 36 Hours 35AEG01A

Tuition: $2880

Purpose.

This course presents a combined application of engineering geology, geophysics, and rock mechanics. 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; Seismology; Basic Rock Mechanics; Rock Excavation; Foundation Treatment; Rock Reinforcement; Rock Slope Stability; 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.

ARCHITECTURAL HARDWARE-QV

3 Length: 36 Hours 35AHQ01A
CEUs: 2.8 PDHs: 28 LUs: 28
Tuition: $2300

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.

AREA OFFICE UNIVERSITY (CM101)

212 Length: 36 Hours 41AOU01A

Tuition: $1110

Purpose.

To provide journeyman level construction management field staff, and those new to the Government, with a "101" level overview of Construction Contract Management and Administration at the Area and Resident Office level. Provide recommended business processes for the typical MILCON design-bid-build model, integrating process, our corporate automation systems, and contractual / regulatory authorities, to illustrate how our work is accomplished in step-by-step fashion.

Description.

AOU instruction provides step-by-step instruction in many processes used in the administration of our construction contracts, including instruction in our core automation systems (RMS, QCS, CEFMS, PD2). Topics include: MILCON (Standard) Process, The Resident office and Project Delivery Team, Preconstruction Planning and Design, Resident Management System (RMS), Quality Control System (QCS), Establishing the Beneficial Occupancy Date (BOD), Quality Assurance (QA) Documentation, Red Zone Process, Submittal Process, Request for Information (RFI) Process, Project Closeout, and in-depth Change Management.

Prerequisites.

The target audience for AOU instruction includes new and recently assigned Area/Resident Engineers, Project Engineers, Quality Assurance Representatives, Civil Engineering Technicians, and Area/Resident Office Administration Support Staff.

BASIC PM IN USACE

355 Length: 32 Hours 46PJM01A

CEUs: 2.3 PDHs: 23 LUs: 23 PDUs: 23

Tuition: $1170

Purpose.

This course is designed primarily for those individuals who are, or will be, a project manager in any program area. Project delivery team (PDT) members from functions other than project management may benefit through improved understanding of the project manager's and their own roles and responsibilities.

Description.

The course provides the basic concepts and philosophy of project management and the USACE project management business process (PMBP); it introduces the phases of a project, discusses roles and responsibilities of the PDT, and provides tools for project management. The course seeks, through presentations, discussions, illustrations, team exercises and case studies to provide current guidance in using project management techniques and the PMBP. Generic project management skills, 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, project scope, work breakdown structures, and project schedules; techniques for cost estimating, risk assessment/contingency management and performance measurement; assessing earned value; resourcing projects, and the civil works and military programs budget cycles.

Team dynamics and individual and team strengths are also discussed and illustrated throughout the course. Completing the individual assessment and the accompanying online training is a course prerequisite. Access to the online assessment and training is provided to students prior to their scheduled PM355 class. Students must bring their results to class on the first day for use in a variety of individual and strength exercises.

This course is designed to teach you key elements of doing project management at USACE. It is intended to be a basic course that may be supplemented by other courses that specifically address in detail such elements as network analysis and scheduling, earned value; or in depth mission specifics, such as Civil Works or Military Programs.

This course includes instruction teaching and reinforcing the following competencies found in the National Technical Competency Study: a) Project Manager USACE Level 1 Certification, and b) Project Management, USACE.

Prerequisites.

This is an overview of project management in USACE; it addresses both hard and soft skills required to manage a project and a team. The course is appropriate for newly assigned project managers or those who anticipate being assigned as a project manager. It is also appropriate for other members of the project delivery team (PDT) who would like to understand the project management process and their own role on the PDT. Nominees should be at Grade GS-11 or above. Pocket calculators are needed for case study work.

Completing the individual assessment and the accompanying online training is a course prerequisite. Access to the online assessment and training is provided to students prior to their scheduled PM355 class. Students must bring their results to class on the first day for use in a variety of exercises.

BOAT OPERATOR LICENSE EXAMINER

172 Length: 36 Hours 33BOL01A

Tuition: $4610

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.

BUDGET TRAINING

254 Length: 32 Hours 42BTC01A

CEUs: 3.3

Tuition: $ 950

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 command operating budget. The material is presented through lectures and practical exercises covering various budgeting processes and budget-related issues.

Prerequisites.

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

BUILDING AIR BARRIERS AND PRESSURE TESTING

126 Length: 36 Hours 35BAP01A

Tuition: $1680

Purpose.

Engineering and Construction Bulletin 2009-29 implement new Army requirements to install continuous air barriers and to perform pressure testing to determine overall air leakage in all new and major retrofit Army construction projects. This class will provide architects, engineers, and QA personnel knowledge and skills to design and construct effective continuous air barriers correctly in Army facilities and to witness buildng pressure tests on completed facilities which will determine overall building air leakage rates.

Description.

Through lecture, hands-on laboratory sessions, and testing, this course presents the following building air barrier and pressure testing related subjects: design and construction of building air barriers including materials, components, and systems; design and construction of HVAC air distribution systems; the USACE Air Leakage Test Protocol; building pressure testing equipment, including manufacturer's fan capacities, calibration requirements, and accuracies; collection of pressure test data (i.e. CFM pressure); and data analysis and calculations, including inear regression, correlation, confident intervals, and error evaluation.

Prerequisites.

Nominees must be assigned (a) Occupational Series: 0800; (b) Grade: GS-05 through GS-14, or equivalent; (c) current or projected position as an architect, engineer, engineering technician, construction representative, or project manager.

BUILDING INFORMATION MODELING

51 Length: 36 Hours 41BIM01A

Tuition: $1115

Purpose.

This course is aimed at facilitating the inclusion of Building Information Modeling (BIM) in the development of construction documents requiring the interoperability of design drawings, contract details, environmental conditions, submittal processes, and other specifications that impact building quality. The implementation of BIM can bridge the information loss currently associated with handing a project from the design team to the construction team and, finally, to the building owner/operator. Each team is able to and reference back to digital information they developed during their period of contribution to the BIM model. This course illustrates through practical examples how architects, construction engineers, and facility managers can use this information to quickly and accurately create sustainable building designs, support construction, and improve operation and maintenance of buildings.

Description.

This course is an overview of the geometry, spatial relationships, geographic information, quantities and properties of building components. It provides a demonstration of the entire building life cycle including the processes of construction and facility operation. This course illustrate how quantities and shared properties of materials can easily be isolated and defined as systems, assemblies, and sequences shown in a relative scale with the entire facility or group of facilities. The focus of the course is on the relationships of the design team, project manager, construction manager, and facility manager and how the use of building information modeling is used to effectively control all aspects of construction, operation, and maintenance.

Prerequisites.

Project, Construction, Facility Managers (GS9-13), Series 0020, 0800, 0150, and 1640

CE COMMANDERS COURSE

120 Length: 96 Hours 15CCC01A

Tuition: $4660

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 Commanders' 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 7 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, and becoming familiar with the associated PMBP portal, Resource Management, Human Resources, Emergency Management, media engagements, engagements with our stakeholders/ customers/partners in the Military and Civil Works missions. 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 class will tour the Hill with Congressional Office visits, hearing from key staffers their experiences with Corps visits.

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 5 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. 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 Director, USACE Learning Center, ATTN: CEHR-ULC-EC, P.O. Box 1600, Huntsville, Alabama 35807-4301.

CE CONTRACT LAW

342 Length: 36 Hours 37ECL01A
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.

CERCLA/RCRA PROCESS

356 Length: 24 Hours 33HEL01A
CEUs: 2.1 PDHs: 21
Tuition: $1280

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 the Department of Defense. It addresses the Defense Environmental Restoration Program which includes the Installation Restoration Program (IRP), the Base Realignment and Closure (BRAC) Program, and the Formerly Used Defense Sites (FUDS) Program. It also has applicability to cleanups conducted under the Formerly Used Sites Remedial Action Program (FUSRAP), the EPA Superfund program, and cleanups at Army Corps of Engineers Civil Works facilities. This is an ISEERB approved course.

Description.

This course has been developed by in-house USACE staff and focuses on the regulatory requirements for cleaning up hazardous substances, pollutants, and contaminants under CERCLA and solid and/or hazardous wastes at RCRA sites. This course covers the CERCLA process as outlined by Subpart E of the National Contingency Plan and the RCRA corrective action process as implemented via EPA guidance, RCRA permit requirements, and consent orders. 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 (ROD), pre and post-ROD changes, remedial design and construction, and public participation requirements. RCRA topics include the initiation of the RCRA corrective action process via permit conditions and consent orders, the RCRA Facility Assessment, RCRA Facility Investigations, Interim Stabilization Measures, Corrective Measures Studies, and Corrective Measures Implementation. In addition to the RCRA course, individual two-day workshops on the CERCLA or RCRA process can be tailored to meet your site specific training 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 Learning Center, Huntsville, AL.

Prerequisites.

Nominees must have at least one year of environmental experience. Priority will be given to personnel directly involved in environmental restoration. The target audience for this course includes the following occupational series: 800 series Engineers (0801, 0819, 0830, 0893, 0896, etc); Environmental Protection Specialist (0028); Program Mangers, Engineering and Science (0340); Industrial Hygienists (0690); Geologists/Hydrologist (1350, 1315); and Chemists (1320).

CIVIL DESIGN FOR PLANNING

218 Length: 36 Hours 35CDP01A
CEUs: 3.0 PDHs: 30 LUs: 30
Tuition: $1700

Purpose.

This course focuses on the Corps of Engineers (USACE) 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, technical and policy review, quality control, value engineering), and tools (mapping, risk based analysis, Project Management Plans, etc.). It discusses the role of the designer, planner, and project manager in the context of the Project Delivery Team. It is intended to reach newly assigned professional scientists/engineers within the engineering, planning, and project management functions of the Corps or those who are new to the Civil Works process. The class can also provide an excellent refresher and update for staff currently working in the program. Individuals not working with, or planning to work with, the USACE 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 execution (planning and design) of a USACE Civil Works project. After completing this course, the student should be able to more effectively execute and coordinate a multi-disciplinary USACE Civil Works project. Topics include organization and development of resources required to execute the process, policy guidance, and various sensitive design concerns within the project planning process (including engineering overview, geotechnical, electrical/mechanical, hydrology and hydraulics, risk-based analysis, value engineering, structural engineering studies, geographic information systems, and the implications of the "12 Actions for Change"). Emphasis is placed on the Independent Technical Review process, and successful navigation through the 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 USACE Civil Works personnel and may be of reduced value to personnel from other agencies. Students completing the class may receive 3.0 CEU (Continuing Education Units), or 30 LU (Learning Units), or 30 PDH (Professional Development Hours).

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, Engineering, or Project Management organizations. (a) Occupational Series: All series; and (b) Grade: GS-07 through GS-13. Individuals not working with, or planning to work with, the USACE Civil Works process may receive less benefit from this class. Steel-toed boots may be necessary

for the class field trip.

CIVIL WORKS COST ENGINEERING

24 Length: 36 Hours 35CCW01A

Tuition: $1660

Purpose.

This course is needed due to the demand for training Cost Estimators in the Civil Works (CW) field. Currently there are a large number of cost estimators in the Corps that do not have the intermediate and advanced civil works cost estimating skills and knowledge to adequately perform their job duties. Estimating civil works projects is a specialized field, whereby correct and accurate estimating is needed in order to support and to successfully complete projects. Also a recent audit of the CoE concluded that the Corps needs to provide more training in the Civil Works field. We also plan to train Project Managers in the CW Cost Engineering course for the first two days on the second or third session of FY2011 or 2012.

Description.

The topics covered include the Civil Works Cost Estimating regulations and CW Cost Engineering technical letter. The requirements for performing risk analysis for CW projects will be discussed. Cost Engineering and the interrelation to project management will be reviewed. Advanced methodology of quantity takeoff and review of plans and specifications will be taught. The course will include discussions and examples on real life civil works cost estimating and conditions effecting production rates, bidding strategies, acquiring transportation and placement of materials. Cost estimating software used for estimating CW will be introduced, however the detailed software applications are covered in other PROSPECT classes.

Prerequisites.

The employees that should attend this class include Cost Engineers and estimators at the District and Division level. Occupational Series: 0800 engineering series and engineering technicians; grades: GS-09 and above. The people attending this class should be currently assigned in Cost Engineering or working in the Civil Works field. This course is designed for the intermediate to advanced cost engineer that works on Civil Works projects during their work duty/responsibility. Potential candidates with less than one year experience in preparing cost estimates or grades GS-7 and below should call the ULC course manager to verify applicability. It is strongly suggested that potential students have taken the Cost Estimating Basics and MII PROSPECT classes.

CIVIL WORKS PROGRAMMING PROCESS

358 Length: 36 Hours 46CWB01A
CEUs: 3.1
Tuition: $1940

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

COASTAL ECOLOGY

263 Length: 36 Hours 33COE01A
CEUs: 2.6
Tuition: $2330

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.

COASTAL ENGINEERING

13 Length: 52 Hours 35CE201A
CEUs: 2.7 PDHs: 27
Tuition: $2180

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 (#11) or an equivalent university level coastal course. Grade: GS-09 or above.

COASTAL PROJECT PLANNING

11 Length: 36 Hours 35CEN01A
CEUs: 2.8 PDHs: 28
Tuition: $4070

Purpose.

This course provides a formal introduction to the technical and management issues important to coastal studies and projects. The course addresses the foundation areas necessary for effectively understanding and working on projects in the coastal zone and is divided into five areas addressing physical setting/location (geology and geomorphology), forcing factors (weather, tides, waves, storm surge), coastal processes (hydrodynamics and sediment transport), coastal problems and solutions, and special planning considerations (sea-level change, regional sediment management, dredging, etc.) The problems, the approach to addressing the problems, and the solutions presented in the class are particularly applicable to the Corps of Engineers' planning and environmental management missions but would be useful to project managers, planners, engineers, regulatory specialists, attorneys, and members of public stakeholder groups involved with studies and projects in the coastal zone.

Description.

Major topics to be covered include: coastal geology and geomorphology, hydrodynamics, littoral sediment transport processes, 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 (including lake shores), 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 be introduced to the "Shore Protection Manual" (SPM) and the "Coastal Engineering Manual" (CEM) as basic reference materials, as well as journal publications and other publications useful for a better understanding of coastal zone issues. Common computer tools used in coastal engineering will be described but will not be taught as part of this course. 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, planners, project managers, regulatory specialists, or attorneys who have review, planning, or design responsibilities for coastal shore protection, navigation, and environmental projects. Grade: GS-07 or above.

CONCRETE ENGINEERING TECHNOLOGY

22 Length: 36 Hours 35CET01A
CEUs: 2.5 PDHs: 25 LUs: 24
Tuition: $3980

Purpose.

This course provides the participant with advanced knowledge in design, construction, and evaluation of concrete and related products.

Description.

This course covers emerging technologies in concrete, concrete construction, and other related materials. Topics such as roller-compacted concrete (RCC), self-consolidating concrete, underwater concrete, low-density concrete, reactive powder concrete, fiber-reinforced concrete, ultra-high-performance concrete, high-volume fly-ash concrete, silica fume concrete, and chemical admixtures, cementitious materials, and non-destructive testing are included in the discussion. Time is also allotted for consultation with instructors. Students who have encountered an actual concrete, construction, or materials problem are encouraged to briefly present their problem to the instructors and class attendees as information or for a possible solution.

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 a design or construction engineer or a senior technician related to concrete materials.

CONCRETE FUNDAMENTALS

21 Length: 36 Hours 35QVC01A
CEUs: 2.4 LUs: 24
Tuition: $1590

Purpose.

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

Description.

Through lectures and demonstrations, this course covers concrete fundamentals such as materials, sampling, testing, handling, mixing, placing, consolidating, finishing, curing, and other miscellaneous items.

Prerequisites.

Nominees must be assigned (a) Occupational Series: 0802, 0809, and 0810; (b) Grade: GS-05 or above. (c) Other: Students should have a current or projected assignment in concrete construction 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.

CONCRETE MAINTENANCE & REPAIR

257 Length: 36 Hours 35CMR01A

Tuition: $1960

Purpose.

This course provides the participant with specific knowledge of materials, techniques, and procedures for evaluation, repair, and maintenance of 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, mortars, resins, surface coatings, and joint sealants. This course does not cover repair or maintenance of concrete pavements.

Prerequisites.

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

CONCRETE MATERIALS

23 Length: 600 Hours 35CMT01A

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.

CONFLICT MGMT & DISPUTE RESOLUTION

306 Length: 36 Hours 15NBD01A

Tuition: $1350

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.

CONST CONTRACT ADMIN

366 Length: 36 Hours 41CCA01A

CEUs: 2.5 PDHs: 25 LUs: 25

Tuition: $1370

Purpose.

This course provides a basic review of the DOD acquisition process as it relates to administration of fixed-price construction contracts. The primary focus is post-award contract administration, but the course includes pre-award coordination and review for field-level personnel. As an introductory course, it also serves as a developmental link between the construction and engineering career ladders. It provides suggested direction and training for students interested in more advanced and/or specialized contract types and focus areas.

Description.

This course covers the typical procudures 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 illustrate 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; GS-05 or above; (b) Grade: GS-05 to GS-13 GS-05 or above; (c) Experience: 0-3 years in the construction function; (d) Responsibilities: personnel should be actively or imminently 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.

Notes.

On-site courses can be tailored to fit group needs. For example, a proposed on-site in Afghanistan should be tailored to limit the number of instructors and content , as the deployment requirements are lengthy and expensive - and the missions of AED are very focused.

CONST QUALITY MGT

29 Length: 20 Hours 35CQM01A
CEUs: 1.5 PDHs: 15 LUs: 15
Tuition: $ 850

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.

Prerequisites.

Nominees must be assigned (a) Occupational series: 0800 or equivalent NSPS; (b) Grade: GS-05 or above or equivalent NSPS; (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.

CONST WET HAB MITI (SEM)

439 Length: 32 Hours 33CWH01A

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).

CONSTRUCTION SCHEDULE PERFORMANCE MANAGEMENT

80 Length: 28 Hours 46NWA01A
CEUs: 2.1 PDHs: 21
Tuition: $1480

Purpose.

USACE manages thousands of construction projects which require its contractors to manage schedule performance using sophisticated network scheduling techniques. The triple constraints of technical performance, budget performance and schedule performance must be effectively managed to insure project success. During the construction execution phase of a project, effective schedule performance management is crucial to overall project success. It is not uncommon for the construction phase to initiate later than desired due to late completion of the programming, planning, design and procurement of the requirement. As a result, construction performance periods may be compressed. During the construction phase, time sensitive costs and the risk associated with late project delivery can be severe. When projects fall behind schedule, it is not uncommon for technical performance (quality, safety) to suffer as the contractor attempts to make up lost time. As well, contractors may be entitled to excusable compensable delay costs if the Government is responsible for any delay. It is of paramount importance that USACE in its role as construction agent, perform effective professional schedule performance management consistent with its contract requirements and industry best practices. This course serves that purpose by training the construction management team in schedule performance management.

Description.

After completing this course, the student should be able to (1) state, interpret and enforce the contract clauses and technical provisions respecting schedule performance management, (2) effectively and efficiently review preliminary, initial and updated schedules for reasonableness, (3) make informed judgments respecting the effectiveness of contractors' schedules to plan the work, predict completion dates and provide an accurate as-built record of how the project progressed from NTP to final acceptance, (4) schedule, filter, organize, sort and produce schedule reports using Oracle's Primavera P6 Professional Project Management software, (5) perform the QCS/RMS/P6 interface, perform basic schedule impact analyses (6) efficiently and effectively perform and review schedule updates, and (7) assess the reasonableness of schedule cost loading, activity coding and work break down structure. ER 1-1-11 and EP 415-1-4, and the UFGS Scheduling Specification are used for reference. Students are taught in a computer lab environment where hands on software training is provided. This is not a course to teach all of the features of Oracle's Primavera P6 Professional Project Management, but rather how to effectively and efficiently use its basic features to eliminate the need to resort to paper plots and reports which are ineffective for schedule analysis.

Prerequisites.

Nominees must be assigned (a) Occupational Series: Selected 0800; (b) Grade: GS-11. Students should have a current or projected assignment requiring knowledge of network analysis as a schedule performance management technique. Students must be proficient in the use of a personal computer. Prior knowledge of a Network Scheduling and the Windows Operating System is required. This course is highly desirable for USACE District Office, Project and Resident engineers, for District Division, Branch, and Section heads of construction and operations.

Prerequisite Training: Nominee should have completed the Scheduling Basics for Projects (#143) course. No basic scheduling will be included in course 080.

CONTRACT MANAGEMENT SYSTEM (CMS)

933 Length: 26 Hours

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, Generating 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.

THIS COURSE IS AN ONSITE CLASS ONLY.

CORROSION CONTROL

9 Length: 36 Hours 35CCL01A

Tuition: $1640

Purpose.

This course familiarizes design engineers, maintenance staff 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.

COST ESTIMATING BASICS

181 Length: 36 Hours 35CEB01A

CEUs: 3.1

Tuition: $1250

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 basic, non-computer based course designed to teach individuals the basic principles of cost estimate preparation, and how to identify and classify costs associated with the construction. Through the use of lectures, visual aids, 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 government estimates summaries.

Prerequisites.

Nominees must be assigned (a) Occupational series: selected 0800; (b) Grade: GS-05 or above or equivalent NSPS; (c) Other: nominees must obtain CECW-EIC approval before attending this course. A pocket calculator is required for this class.

COST REIMBURSEMENT

1 Length: 36 Hours 41CRC01A
CEUs: 2.5 PDHs: 25
Tuition: $1755

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, or equivalent; 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 Construction Contract Administration course (No. 366).

COST RISK ANALYSIS BASIC

220 Length: 32 Hours 35CRA01A

Tuition: $2230

Purpose.

This course provides training on basic cost risk analysis principles and fundamentals. The training is intended for the Cost Engineering professional with little or no cost experience in cost risk analysis techniques who will be responsible for the review or preparation of construction contingencies for Civil Works and MILCON cost estimates.

Description.

This is a computer based course, and is designed to provide a solid introduction to the theory and application of risk analysis problems involving multiple numeric uncertainties (e.g. budget to detailed cost estimating, contingency analysis, and competitive bidding) and demonstrate why risk analysis is necessary, and how to mitigate the probability of having a cost overrun.

Through the use of lectures, visual aids, individual and group practical exercises, the course will provide instructions on: (a) procedures and cost engineering regulations regarding the use of cost risk analysis, (b) basic statistics (c) data gathering, (d) uncertainties identification and quantification, and (e) interpretation and use of the results.

This course will discuss, and provide familiarization and hands on training of the computational tool, Crystal Ball. Crystal Ball is the Corps required software for preparing risk analysis for contingency development.

Prerequisites.

Nominees must be assigned (a) Occupational series: selected 0800; (b) Grade: GS-11 and above, and have completed the Cost Engineering Basic course; (c) Other: nominees must obtain CECW-CE approval before attending this course. A pocket calculator is required for this class.

CQM FOR CONTRACTORS

784 Length: 16 Hours 54CQV01A
CEUs: 1.3 PDHs: 13 LUs: 13

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 Modules (8) the Resident Management System (9) NAVFAC's web-based Construction 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.

Upon successful course completion, certificates are valid for five years.

Prerequisites.

None

CQM-CD ROM

795 Length: 12 Hours 54CQR01A
LUs: 10

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 the Construction Quality Management course. 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.

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.

CRANE SAFETY

32 Length: 30 Hours 58CNS01A

Tuition: $ 970

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.

CULTURAL RESOURCES

299 Length: 36 Hours 33CUR01A

Tuition: $2520

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 PCC1 Civil Works Orientation course, or equivalents.

CUSTOMER RELATIONSHIP MANAGEMENT

224 Length: 20 Hours 15CRM01A

Tuition: $ 890

Purpose.

What is CRM and why it is important, Objectives and benefits of CRM, Components of CRM, Hard and soft skills of CRM, The relevance of recruitment, hiring and retention and sustainment of technical competency to CRM, Where you fit into CRM, The CRM process, Developing a strategic engagement plan, Developing a customer account plan, CRM Implementation and Evaluation.

Description.

This course focuses on the what, where, when, why, and how of managing relationships with USACE customers. Managing relationships is key to assuring we meet customers' needs and that we effectively partner with customers in developing innovative solutions to engineering issues now and into the future. From this course, students will gain an understanding of the concept of CRM, learn the value of building long-term customer relationships, understand the corporate language for CRM, learn how to develop customer-focused strategies and evaluate CRM effectiveness.

Prerequisites.

Generally those who are in direct contact with customers. Specifically that includes: USACE Outreach coordinators, Customer Account Managers, Project Managers and Program Managers. Sometimes this also includes key project delivery team members – in addition to those specifically mentioned. Students should be journeyperson level or above and have had experience working with customers.

CW PROGRAM DEVELOPMENT

10 Length: 28 Hours 46CWP01A
CEUs: 2.3
Tuition: $1100

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 Congressional 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.

CWMS MODELING FOR WATER MANAGEMENT

155 Length: 36 Hours 35RTW01A

Tuition: $2400

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 CWMS 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 for real-time reservoir or flood control operations and with the H&H models mentioned above.

DAM SAFETY

28 Length: 32 Hours 54DAS01A
CEUs: 2.6 PDHs: 26
Tuition: $2170

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, GS-05 or above.
This course is intended for all personnel involved in the design, construction, operation, inspection, and maintenance of Corps dams.

DESIGN BUILD CONSTRUCTION

425 Length: 36 Hours 35DBM01A
CEUs: 3.1 PDHs: 31
Tuition: $1350

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.

DEVELOPMENT OF PROJECT PARTNERSHIP AGREEMENTS

315 Length: 36 Hours 46LCA01A

Tuition: $ 840

Purpose.

This course provides the basic knowledge, skills, and abilities needed to develop, negotiate and process for approval agreements (Project Partnership Agreements (PPA), Design Agreements (DA), and Feasibility Cost Shared Agreements (FCSA)) used for implementation of cost shared Civil Works water resources development projects and the supporting documents necessary for the agreement packages. Lecturers and instructors include HQUSACE staff, Division staff, and a guest speaker.

Description.

Topics include: (a) Development, negotiation, and processing of Agreements (such as PPA, DA, and FCSA) for cost shared Civil Works water resources development projects; (b) Implementation of cost shared Civil Works projects including cost sharing policies; (c) Planning, Policy, Programs, Real Estate, and Legal aspects and considerations in development of Agreements; (d) In-Kind Contributions authorities; (e) Policies and procedures to account for project funds including preparation of Federal/Non-Federal Funds Allocation Table and determining non-Federal proportionate share; (f) Requirements for accelerated, contributed, and advanced funding; (g) Non-Federal Sponsor Self-Certification of Financial Capability Form; and (h) Project examples and experiences.

Prerequisites.

Nominees must be assigned (a) Grade: GS-09 to GS-15; and (b) current responsibilities in Project Management; Study Management; Engineering Management; Planning; Programs; Real Estate; Counsel; and Cost Share Control Record Managers or others assigned to the Office of Resource Management and Internal Review.

DIESEL GENERATORS: BASICS/TESTING

106 Length: 36 Hours 54DGN01A

Tuition: $1830

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 utilize a diesel generator unit for performing 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 or equivalent NSPS pay band. Nominees should have current or projected responsibilities that include power generation specification, procurement, installation, testing or operation. The broad content of the course is beneficial for technically-oriented construction, design, and maintenance personnel. Although this is not intended to be a maintenance course, maintenance personnel should benefit from this course. Recommend that nominees complete the Electrical, Mechanical, or General Quality Verification Courses prior to taking this course. Engineers are exempt from this prerequisite requirement.

DISPOSITION OF INSTALLATION FACILITIES

951 Length: 36 Hours 49DIF01A

Purpose.

This is an advanced level Installation training course for Real Estate and Real Property Action Officers with experience and knowledge of federal real estate practice. This training is presented from the installation point of view. Installation documentation to complete Real Estate and Real Property Actions is the main focus of this training.

Description.

This course provides in-depth training on the disposal process. It provides step-by-step guidance on the various types of disposal, as well as detailed exploration of some of the more difficult disposal issues, such as environmental or historical considerations. Students will learn the entire lifecycle of the disposal process including the various methods of identifying excess real property, various types of disposal, and identification of the type of disposal best suited for land or facilities.

Notes. Topics that are addressed within the course include; Introduction to Real Estate Disposal, Types of Disposal Processes, GSA Delegations of Disposal Authority, Identification of Excess Property, Environmental Documentation for Disposal, Historical, Natural and Other Considerations, Preparation of Disposal Documentation, and Interim Management of Excess Properties.

Prerequisites.

This course provides in-depth training on the disposal process. It provides step-by-step guidance on the various types of disposal, as well as detailed exploration of some of the more difficult disposal issues, such as environmental or historical considerations. Students will learn the entire lifecycle of the disposal process including the various methods of identifying excess real property, various types of disposal, and identification of the type of disposal best suited for land or facilities.

Notes. Topics that are addressed within the course include; Introduction to Real Estate Disposal, Types of Disposal Processes, GSA Delegations of Disposal Authority, Identification of Excess Property, Environmental Documentation for Disposal, Historical, Natural and Other Considerations, Preparation of Disposal Documentation, and Interim Management of Excess Properties.

DISTRICT OFFICER INTRODUCTORY COURSE

334 Length: 36 Hours 41DOI01A
CEUs: 3.4
Tuition: $2985

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 Engineers 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.

DIVE SAFETY ADMIN

175 Length: 72 Hours 54DVC01A

Tuition: $3860

Purpose.

This course provides Corps of Engineers employees who are assigned as diving coordinators, alternate diving coordinators, Dive Inspectors and Safety Office Diving Safety Representatives with the necessary skills, knowledges, and abilities to perform their assigned duties. This training will provide students with state-of-art technology and methodology to evaluate underwater diving operations and effectively manage diving contingencies. NOTE: This course or the course “Working Diver” is required for all diving coordinators and alternate diving coordinators, and is recommended for all Safety and Occupational Health Office Diving Safety Representatives.

Description.

Students will become familiar with state-of-art diving systems and methodology, including support activities and dive equipment. This course consists of classroom presentations and practical exercises in dive planning and execution involving actual dive operations. The focus of the course is on Safety Requirements, Dive Planning, Hazard Analysis, Risk Management Emergency Management and Contract Administration, particularly as a function of the Project Management Business Process (PMBP). 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.

Students for this course should have a current or projected assignment as a District Diving Coordinator, Alternate District Diving Coordinator, Dive Inspector, or Safety and Occupational Health Office Diving Safety Representative. Students must participate in all lectures, written and practical exercises, and score at least 70 percent on the comprehensive post-course examination to pass the course. Exceptions or deviations to any of these prerequisites shall be approved by the HQUSACE Safety and Occupational Health Office.

NOTE: This course will be conducted at the same time as the Diving Refresher course. However, a participant cannot be certified in both courses during this training period. A participant will only be certified in the course that he/she is registered in.

Formerly titled "Diving Coordinator".

DIVE SAFETY ADMINISTRATION REFRESHER

397 Length: 40 Hours 33DIS01A

Tuition: $2780

Purpose.

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

Description.

This course consists of both classroom discussions and water-side 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 completed the Dive Safety, Dive Supervisor, Dive Inspector or Dive Safety Administrator Course and have a current or projected assignment to a position that requires knowledge of contractor diving operations, and is not a currently certified 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.

NOTE: Formerly titled "Diving Inspector".

DIVING REFRESHER

259 Length: 64 Hours 54DVR01A

Tuition: $4570

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 Working Diver and/or Diving Coordinator 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) must be presented at the course.

DPW BASIC ORIENTATION (DPWBOC)

988 Length: 36 Hours 54DBO01A

Tuition: $1350

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 instruction includes lectures and practical exercises.

Prerequisites.

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

DPW BUDGET/JCA

981 Length: 32 Hours 42DBF01A

Tuition: $1370

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.

Notes.

Prerequisite - IFS, Basic & Intermediate Courses.

DPW BUSINESS OPERATIONS & INTEGRATION

901 Length: 60 Hours 41BOI01A

Tuition: $1700

Purpose.

The Army is moving from a budget management system to a cost management system. This changes DPW business practices, information management strategies and systems, and the presentation and interpretation of performance qualitative and cost data. DPWs must be very adept at using the General Fund Enterprise Business System (GFEBS), Installation Status Report, Common Levels of Support, cost management, and continuous process improvement tools and techniques to effectively manage the real property activities and to track and measure actual performance.

Description.

Topics include work management planning, work management execution, financial management, program/functional management, personnel management, garrison organization, missions and functions, project acquisition strategies, annual work plan, resource management plan, business plan, work classification and project approvals, work reception, preventive maintenance, municipal services, SRM and MILCOM project management, Project Prioritization System (PPS), process improvement, information management (STAMIS, GFEBS, Management Engineering Systems), CLS and ISR.

Prerequisites.

Nominees should be in one of these categories:

BOID Division, Branch and Section Chiefs, 896 and 801 GS-11/12, Directors of DPW 801-13/15, other Garrison DPW Division Chiefs gs-12/14, IMCOM HQ & Regional Staff GS-13/15, CP18 Interns with target positions in BOID GS-07/09/11. The DPW Basic Orientation Course is a prerequisite for this course.

DPW ENGINEERING

902 Length: 36 Hours 41EDM01A

Tuition: $1530

Purpose.

The DPW Engineering Division manages acquisition of professional engineering and construction services from several sources. This course provides the journeyman an overview of the engineer and installation business processes used to accomplish the Garrison engineering mission. The ability is needed to select design and project delivery methods that effectively support the Garrison. Implementing these decisions requires knowledge of resource management, acquisition management, design management, and construction management.

Description.

Topics include planning and delivering engineering services, design program and execution management, construction program and execution management, USACE Installation Support program, design management tools and processes, safety and quality management(control and assurance), project acquisition strategies, types of contracts, information technology, energy conservation programs (ESPC, UESC, ECIP, Energy Security Strategy, Renewable Energy), A&E contracting and negotiations, environmental awareness and value engineering.

Prerequisites.

Nominees should be in one of these categories:

Engineering Division, Branch and Section Chiefs, 801 primarily, 810, 830, 850 GS-11/12; Directors of DPW 801 GS-13/15; other Garrison DPW Division Chiefs GS-12/14; IMCOM HQ & Regional Staff GS-13/15; CP18 Interns with target positions in Engineering GS-07/09/11.

DPW JOB ORDER CONTRACTING ADVANCED

991 Length: 24 Hours 441DJA01

Tuition: $1280

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.

After completing the course, the student should be able to serve as a knowledgeable ordering officer for the JOC Branch within the DPW as well as scope SRM projects using the JOC unit price book, manage construction contracts and schedules, and manage projects in accordance with RPMA program requirements, i.e., determine appropriate funding programs, work classification, etc. as well as understand the IQC delivery process, competitive bid process, and firm-fixed price requirements. The students will understand the overall process of contract changes, modifications, and claims processes in accordance with the FAR and AFARS.

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

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 Basic 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.

Notes.

Follow-on course(s): #366, Construction Contract Management

DPW JOB ORDER CONTRACTING BASIC

990 Length: 24 Hours 41DJB01A

Tuition: $1180

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.

After completing the course, the student should be able to serve as a knowledgeable ordering officer for the JOC Branch within the DPW as well as scope SRM projects using the JOC unit price book, manage construction contracts and schedules, and manage projects in accordance with RPMA program requirements, i.e., determine appropriate funding programs, work classification, etc. as well as understand the IQC delivery process, competitive bid process, and firm-fixed price requirements.

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

Notes.

Students should bring a calculator.

DPW MANAGEMENT ORIENTATION COURSE

989 Length: 36 Hours 15DMO01A

Tuition: $1770

Purpose.

This course provides an executive overview of DPW Operations and Management for new Directorate of Public Works Managers.

Description.

This course covers the administration, organization, functions, and management systems of the installation DPW to include: An Overview of the DPW Organization: Business Operations Overview, Business Management, CP-18 Career Management, Environmental Programs Overview, Sustainable Range Management, Contract Management, Housing Functions & Funding Limits, OMA Project Classification & Approval of the DPW Financial Management and DPW Work Management Systems; the DPW Resource Management, the DPW Information Technology Initiatives; and Real Property Master Planning. Other topics include: Department of Defense (DOD), Department of the Army (DA) and Installation Management and Organization concepts relative to DPWs; 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; classroom discussion; and individual assignments.

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-12 or above, at installation level, Region or HQDA, DPW/District/Division who are covered by either the Housing management or Engineer and Scientist career programs. All nominees should have less than two years DPW experience.

DPW OPERATIONS & MAINTENANCE

903 Length: 36 Hours 41OMM01A

Tuition: $1570

Purpose.

With all of the emphasis in privatization, information management strategies and technology, it is critical to ensure Operations and Maintenance staffs are up to date with new engineer standards and business practices. Sustaining critical infrastructure is very important and must be dealt with under scarce resources and budget constraints. Students will be exposed to management techniques, facility life cycle management, performance based service acquisition and sustainment management systems.

Description.

Topics include preventive maintenance management, component life cycle management, energy conservation programs (ESPC, UESC, ECIP, Energy Security Strategy, Renewable Energy), privatization contract management, critical infrastructure, performance based service acquisition (requirements, procurement, and contract administration), process improvement, sustainment management systems (PAVER, ROOFER, RAILER and PIPER), master planning, plant operations, municipal services (custodial, solid waste, refuse removal and ground maintenance), and pest management

Prerequisites.

Nominees should be in one of these categories:

Engineering Division, Branch and Section Chiefs, 801 primarily, 810, 830, 850 GS-11/12; Directors of DPW 801 GS-13/15; other Garrison DPW Division Chiefs GS-12/14; IMCOM HQ & Regional Staff GS-13/15; CP18 Interns with target positions in O&M GS-07/09/11

DPW PERFORMANCE-BASED SERVICES ACQ

974 Length: 36 Hours

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.

DPW PROGRAM MANAGEMENT

999 Length: 30 Hours 15DMF01A

Tuition: $1820

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 DPW Management Orientation Course, Crs. No. 989. Nominees must work as a branch chief at a Directorate of Public Works. Nominees must also have 2 years experience working with the Directorate of Public Works (DPW). US Army Corps of Engineers nominees must work with Installation Support personnel.

DPW QUALITY ASSURANCE

972 Length: 28 Hours 41DQA01A

Tuition: $1180

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.

After completing the course, the students should be able to understand the DOD guidance, techniques, tools, and commercial item acquisition procedures as they relate to performance and service based contracts. The student should be able to prepare an SOW for QA contract as well as prepare a Quality Assurance and Surveillance Plan (QASP); for example, MEO PWS metrics/contracts.

This will be achieved 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. In addition to DPW quality management techniques and responsibilities, various users' partnerships with and participation in the Corps of Engineers' quality management program and involvement in USACE management of DOD projects will be explored.

The elements of the QASP 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. Students prepare a government contract quality assurance program using a sample contract as the basis for the work which includes various Assurance QA Plan attachments such as surveillance activity checklists, inventory of services worksheets, etc. 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. However, the following GS Series - 1107, 0800, 1170, 0340, & 0020 should attend.

Notes.

*Initial &/or Refresher COTR/COR training and Basic PM, Course #355, are recommended as prerequisites but are not required.

*CQM, #29, is recommended as a follow-on course since many of the contracts managed by DPW staff are design/construction related contracts.

DPW WORK RECEPTION

980 Length: 24 Hours 46DWR01A

Tuition: $1840

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 of on-the-job experience in the area of customer service. This course is for DPW Installation Personnel.

DREDGE COST ESTIMATING

118 Length: 36 Hours 54DGE01A
CEUs: 2.8 PDHs: 28
Tuition: $2850

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 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. Dredging Fundamentals is a suggested (not required) class to be taken prior to this course.

DREDGING FUNDAMENTALS

333 Length: 36 Hours 54DFM01A
CEUs: 2.5 PDHs: 25
Tuition: $1910

Purpose.

This course provides the student with fundamental dredging 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 Cost Estimating course.

Prerequisites.

Nominees must be assigned (a) Occupational Series: Dredging related; (b) Grade: GS-04 through GM-13 or NSPS equivalent. Students should bring clothing appropriate for a field trip aboard an operating dredge including rain gear, normally located on open water. Safety and/or athletic 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.

DREDGING: CONTRACT ADMINISTRATION

211 Length: 24 Hours
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 discus-sions 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 GS-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.

E&D QUALITY MANAGEMENT

208 Length: 20 Hours 35EQM01A
CEUs: 1.7 PDHs: 17 LUs: 17
Tuition: $1770

Purpose.

Improve the quality of projects, products and services, and enhance customer satisfaction by training team members in the policies, 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 the 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-engineer firms and in-house technical personnel. Classroom presentations are supplemented by active classroom discussions and group exercises.

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.

EARLY CONTRACTOR INVOLVEMENT (ECI)

344 Length: 36 Hours 41ECI01A
CEUs: 3.0
Tuition: $1410

Purpose.

This course provides trainees an understanding of the use and application of the Early Contractor Involvement (ECI) Project Delivery System. ECI is an integrated project delivery system that uses an incentive type contract, operating under the FAR Successive Targets Clause. The delivery system is unique to USACE and differs from the design-build and design-bid-build delivery systems. It is premised on the concept of bringing the designer and constructor together early in the project design phase under two separate contracts.

Description.

The training defines and provides lessons-learned regarding the process of initiating, planning and executing a project using the ECI delivery system. Topics include: ECI definition and introduction; acquisition planning, ECI contract formation and legal sufficiency; ECI project planning, solicitation development, evaluation and award; administering the pre-construction phase; awarding construction options; awarding and administering 'fast track' packets; cost and pricing principles; negotiating at the production point; and involvement of DCMA and DCAA.

Prerequisites.

Nominees should be Project Delivery Team (PDT) members and/or their supervisors, who will be involved in projects utilizing the ECI delivery system (Contracting, Counsel, Project Management, Engineering, Construction and Customers). Varying experience levels are acceptable, but a basic understanding of Acquisition Planning, Best Value Tradeoff Source Selection Process and Construction Contract Administration is required.

EARTHWORK CONSTRUCTION--QV

40 Length: 36 Hours 35EWI01A
CEUs: 2.4
Tuition: $1520

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-05 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.

ECONOMIC ANALYSIS MILCON

101 Length: 28 Hours 35EAM01A

Tuition: $1430

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.

Students need to bring a pocket calculator to this course. They are also encouraged to bring an E/A that they are currently working on or have in the processor for review.

ECOSYSTEM RESTORATION

280 Length: 36 Hours 33ECR01A

Tuition: $2080

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.

ELECTRICAL DESIGN I

373 Length: 36 Hours 35ED101A
CEUs: 3.3 PDHs: 33
Tuition: $1430

Purpose.

This course clarifies criteria and practices for electrical engineer designers to assure an adequate design and review of electrical features of government projects and to improve design quality and incorporate AT/FT requirements. 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) 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 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 developing the riser diagram.

(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.

(h)CLASSROOM EXERCISE: Students design a building's electrical system.

Prerequisites.

Nominees must be assigned (a) Occupational Series: 0850,and 0855. Those in 0801 series or equivalent electrical professions who have an electrical background may also attend. Nominees should be electrical or electronic engineers or have electrical engineering responsibilities with a basic background in the practical applications of electrical and electronic projects.

ELECTRICAL DESIGN II

374 Length: 36 Hours 35ED201A
CEUs: 3.3 PDHs: 33
Tuition: $1645

Purpose.

This course clarifies criteria and practices to assure an adequate design or review of electrical features (including AT/FP requirements) 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) ARC FLASH HAZARD ANALYSIS: This session covers the requirements and procedures to perform this analysis and provides the end user with the required information for marking hazards on electrical equipment and for providing proper personal protective equipment (PPE).

(f) 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.

(g) 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.

(h) CATHODIC PROTECTION: This session discusses galvanic corrosion and the design of sacrificial cathodic protection systems.

(i) WIRING SYSTEMS AND APPLICATION ISSUES: This session discusses wiring and cabling, telephone, public address and intercom systems, and fire protection systems including fiber-optic cable applications.

(j) AIRFIELD LIGHTING: This session discusses the electrical wiring system requirements for airfield lighting and control.

(k)LIGHTNING PROTECTION: This covers the fundamental requirements and procedures to design lightning protection systems for structures that comply with NFPA 780 and other DoD criteria. Transient voltage surge suppression (TVSS) will also be covered.

(l) 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.

Prerequisites.

ELECTRICAL EXTERIOR DESIGN

90 Length: 36 Hours 35ESC01A
CEUs: 3.3 PDHs: 33
Tuition: $2000

Purpose.

This course presents an overview of the basic rules for 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. AT/FP requirements are also discussed. In order to receive the most benefits from this topic it is strongly recommended that the student have a working knowledge in the interpretation of time vs. current characteristic curve plots or have attended course Electrical Design I.

Description.

(a) INTRODUCTION: This segment presents the Technical Manuals and United Facilities Guide Specifications (UFGS) applicable to exterior design. The development, structure and application of the NESC are 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 will illustrate why different voltage levels should be used for different applications.

(b) GROUNDING: This portion addresses the fundamentals of grounding: to include earth grounding, protective equipment operation, the flow of current to the electrode and its transfer to the earth, and electrode effectiveness. The grounding rules portion covers: the grounding conductor's point of connection, grounding conductor properties, the means of connection, grounding electrodes, methods of connection, and ground resistance. The allowed connections between grounding conductors and electrodes serving low-voltage, secondary circuits and those serving high-voltage, distribution lines and equipment are discussed.

(c) ELECTRIC SUPPLY STATIONS: This segment presents equipment arrangements in substations including enclosing equipment and selecting equipment. The requirements for protective grounding, the guarding of live parts, and providing working space around live equipment are also emphasized.

(d) DESIGN, CONSTRUCTION, AND MAINTENANCE OF OVERHEAD ELECTRIC SUPPLY LINES: This portion addresses the design and construction of equipment, grounding, clearances, strength and loading. NESC fundamental concepts and requirements are explained and discussed in detail. Students discuss design/construction information.

(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 using sample problems.

(g) FACILITY DESIGN: This session develops a detailed design of a facility including connections to the power station, overhead/underground wiring system, transformers, service equipment, meters, grounding, and protection systems.

Prerequisites.

Nominees must be assigned (a) Occupational Series: 0850, and 0855. Those in 0801 series or equivalent electrical professions who have an electrical background may also attend. Nominees should be electrical or electronic engineers or have electrical engineering responsibilities with a basic knowledge of the design and/or construction and maintenance of substations, switchyards, and overhead and underground power.

ELECTRICAL QUALITY VERIFICATION

42 Length: 36 Hours 35ELC01A
CEUs: 3.0 PDHs: 30 LUs: 30
Tuition: $1795

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 (NEC).

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.

ELECTRONIC SECURITY SYS (ESS) DESIGN

360 Length: 36 Hours 55ESS01A
CEUs: 3.2 PDHs: 32
Tuition: $1250

Purpose.

This course is directed toward a variety of professional disciplines that typically make up a security design team, including: physical security specialists, anti-terrorism and force protection officers, engineers, technicians, planners, and project managers. Each student is given the basic knowledge and skills necessary to contribute to an ESS design effort.

Description.

Students are provided a solid foundation in all aspects of ESS technology and design. Instructors with extensive ESS qualifications and experience explain the basic theory, operation, and application of all ESS components--including intrusion detection systems (IDS), electronic entry control devices, video cameras (CCTV),and illumination sources. Requirements and techniques for effective system integration using a robust communications, commmand, and control (C3) infrastructure are emphasized. After completing the course, students should be proficient at conducting an ESS site survey, developing an ESS concept design, and performing quality assurance (QA) inspections and performance verification testing during the ESS installation phase. Throughout the course students are encouraged to actively participate by asking questions, analyzing case sudies, and solving practical design problems.

Prerequisites.

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

ENV REG PRACTICAL APPLICATION

398 Length: 36 Hours 33MEC01A
CEUs: 2.2 PDHs: 22
Tuition: $1960

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.

ENV REMED TECH-CONTAINMENT

337 Length: 20 Hours
CEUs: 1.6 PDHs: 16

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 Reactive Barriers, 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.

ENV REMED TECH-SUBSURFACE

371 Length: 20 Hours
CEUs: 1.6 PDHs: 16

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.

ENV REMEDIATION TECHNOLOGIES

395 Length: 36 Hours 35GHS01A
CEUs: 2.8 PDHs: 28
Tuition: $2850

Purpose.

This course provides the student with a practical understanding of various containment, ex-situ, 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.

After completion of this course, the student should have an understanding of the current site characterization strategies and remediation technologies being used on USACE projects. The class trip to a hazardous waste site provides an opportunity to see technolgies that have been implemented. The student will also be introduced to available guidance from the USACE, EPA, Air Force, ITRC, 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/or chemistry would be helpful, but are not necessary.

ENVIRONMENTAL IMPACT ASSESSMENT

169 Length: 36 Hours 33EIA01A
LUs: 31
Tuition: $1520

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 examination of some 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 are 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 current regulations and standards, 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.

ENVIRONMENTAL LAWS & REGULATIONS

170 Length: 36 Hours 33ELR01A
LUs: 31

Tuition: $1080

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 course.

ENVIRONMENTAL WRITING

198 Length: 22 Hours 53EVW01A

Tuition: $1850

Purpose.

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

Description.

Following this course, attendees will know the appropriate content and formatting requirements for NEPA documents that will be separate, combined with, or integrated as part of other project reports. As a result of the classroom instruction and several workshops, students will be better prepared to (a) interpret regulations and procedures relating to NEPA documents; (b) use the multi-objective, interdisciplinary planning framework for producing EAs and EISs; (c) organize material such as alternatives and impacts in a logical manner; (d) design graphic and tabular displays; (e) review and evaluate Corps documents for correct content and readability; and (f) prepare legally sufficient and defensible NEPA documents.

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.

Notes.

This course focuses on content and preparation of NEPA documents; not on scoping, information gathering or editorial skills.

EST FOR CONST MODS

180 Length: 36 Hours 41ECM01A
CEUs: 3.4 PDHs: 34 LUs: 34
Tuition: $1270

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-05 or above and comparable military with a current or projected involvement in the preparation, review, or use of construction cost estimates for contract modifications.

FEDERAL FACILITY PLANNING AND RELOCATION

953 Length: 24 Hours
LUs: 18

Purpose.

The purpose of this Seminar is to introduce students to all phases of the project delivery process for space acquisition, particularly programming, building material specifications, furniture specifications, sustainable design issues and relocation processes. The seminar will provide essentials tools and skills for novices and beginners to perform the necessary tasks associated with space planning and relocation. Never the less, experienced programmers and facility managers will benefit from explanations of the management consequences of their technical tasks. Emphasis will be on the strategic importance of programming in an orderly planning process.

Description.

The three day seminar will be presented placing the student in the role of a project manager. The material will be presented and organized according to the step-by-step sequence of tasks that comprise the six phases of a straightforward project delivery process for federal facility spaces. The general structure of the course is as follows: project delivery process overview, building surveys, user surveys, development of workstation standards, calculating space requirements, identifying the project delivery team, development of building standards, sustainable design issues, furniture selection, furniture procurement, identifying the relocation team and the tasks associated with relocating an organization or activity. A mock client will be used in the practical exercises to provide the students with hands-on problems to solve. Throughout the three days of instruction, the strategic management aspects of providing information on which sound space and furniture procurement package are based will be emphasized. During class lectures opportunities will be provided for students to discuss the challenges of implementing the plans developed by the students. A "lessons learned" list will be developed by the class associated with each phase of the project delivery process to bring attention to the potential problems that can occur during a project.

Prerequisites.

This class is open to all Military and Civilian personnel employed by the U.S. Government. Nominees must be assigned in Civilian Occupational Series: 0301, 0301, 0322, 1342, 0344, 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 federal facility or the assignment of organization to an installation/major federal facility. Student should bring a hand-held calculator to the seminar.

On-Site Only

FINANCE AND ACCOUNTING

12 Length: 36 Hours 42FAE01A
CEUs: 3.3
Tuition: $ 990

Purpose.

To enhance the attendee's knowledge and understanding of finance and accounting policy and managerial accounting principles in USACE.

Description.

The concepts of finance and accounting policies and procedures in the Corps of Engineers are presented. Emphasis is placed on professional accounting standards and requirements, managerial accounting functions, and compliance with the Chief Financial Officers' Act.

Prerequisites.

Nominees must be assigned in CP-11 in one of the following Occupational Series: 0510 Accountant; 0501 Financial Analyst; 0503 Management Analyst; 0505 Financial Manager; 0511 Auditor; 0560 Budget Analyst; 0343 Program Analyst. Participants must be at GS-07 grade level or above. Students must be Corps of Engineers employees, DA interns assigned to USACE, or foreign nationals working in USACE Resource Management Offices.

FIRE EXTINGUISHING SYSTEMS DESIGN

33 Length: 36 Hours 55FES01A

Tuition: $3120

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.

FIRE PROTECTION ENGINEERING (BASIC)

6 Length: 36 Hours 55FPE01A
CEUs: 3.4 LUs: 34
Tuition: $1500

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 a construction office, or as a project manager with duties which require a technical knowledge of fire protection engineering principles.

FLOATING PLANT SAFETY

81 Length: 28 Hours 58FPD01A

Tuition: $1180

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 the 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 Government personnel that have responsibility for purchasing, maintaining, inspecting, or operating floating plant, dredging equipment and/or operations subject to the requirements of EM385-1-1. 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 and environmental requirements; (j) how to perform safety inspections and record findings; (k) on-board inspections of floating plant (practical exercise); (l) safety program management; and (m) contingency/emergency operations.

Prerequisites.

Nominees should include dredging inspectors, quality assurance representatives, project and resident engineers, safety specialists, managers and/or engineers, vessel operators and crew, maintenance personnel, and personnel in other career fields that have an interest in floating plant and dredging safety. Students should have a basic understanding of floating plant and dredging equipment and/or operations. Students should bring clothing appropriate for a field trip aboard an operating vessel, normally located on open deck areas. Safety and/or athletic 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. Laptop computers or other devices to aid in learning may be used.

FLOOD CONTROL & COASTAL EMER

158 Length: 36 Hours 35FCC01A

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.

FLOOD DAMAGE ANALYSIS TOOLS W/GIS

316 Length: 36 Hours 35FDA01A

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 ANALYSIS

123 Length: 36 Hours 35FFA01A

Tuition: $1890

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. Course nominees must have completed a college-level statistics course in order to succeed in this class.

FUNDAMENTALS OF WETLANDS ECOLOGY

272 Length: 36 Hours 33WET01A
CEUs: 2.3 PDHs: 23
Tuition: $2540

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.

GENERAL CONSTRUCTION-QV

54 Length: 37 Hours 35GCQ01A
CEUs: 3.3 PDHs: 33 LUs: 33
Tuition: $1070

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. This course would be very helpful for field installation personnel who perform operation and maintenance repair on building systems and personnel who have real property inspection duties.

Prerequisites.

Nominees must be assigned (a) Occupational Series: 0801, 0802, 0808, 0809, 0810, 0830, and 0850; (b) Grade: GS-05 or above or equivalent. 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.

GIS INTERMEDIATE

167 Length: 24 Hours 54GII01A

Tuition: $1190

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 provides knowledge of advanced GIS concepts. Specific issues addressed:

(a) Database Design. Best ways to create databases for solving specific problems and avoiding the need to later redesign so as 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;

(c) Error. Error types, calculation, and issues related to propagation of error during analysis.

(d) Presentation of Results. Preparation and presentation using key elements 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.

GIS INTRODUCTION

205 Length: 36 Hours 54GIS01A

CEUs: 2.2 PDHs: 22

Tuition: $1210

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 should introduce students to the concept of GIS as an integrator of geospatial data and as an analysis tool emphasizing emergency management, natural resources and environmental applications. Topics include:

(a) concept and operation of GIS, data entry, storage, display, and output;

(b) geospatial data structures and their advantages;

(c) compatibility issues;

(d) analysis, modeling, QA/QC;

(e) selection of a GIS;

(f) importation of imagery CAD files; and

(g) 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 or (e) supervisors or others from any occupational series who are considering or are interested in the possible use of GIS in their business process.

GPS FOR GIS APPLICATIONS

187 Length: 36 Hours 35GOV01A
CEUs: 2.8 PDHs: 28
Tuition: $2370

Purpose.

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

Description.

This course covers basic GPS/GIS concepts using the Spatial Data Standards principles and applications; related cost factors; 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.

GROUTING FUNDAMENTALS AND CURRENT PRACTICE

217 Length: 40 Hours

Purpose.

This course provides engineers, geologists, and field inspection personnel with the latest 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) micro-fine cement and grouting.

Prerequisites.

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

Notes.

This course is offered by the Colorado School of Mines. If you are interested in applying, please contact Dr. D. Scott Kieffer, Minings Earth Systems Engineering, Colorado School of Mines, telephone: 303.273.3714; email: skieffer@mines.edu.

H&H FOR DAM SAFETY STUDIES

320 Length: 36 Hours 33HHD01A

Tuition: $2000

Purpose.

Computation of inflows to a reservoir, 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 these tools is expanding.

Description.

Through a series of lectures and hands-on workshops, the students will learn about 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 downstream tributaries, spillway sizing and operation, hydraulic calculations of flow through dam outlets, dam breaching analysis, hydraulic routing of dam break flood waves, and inundation mapping.

Prerequisites.

Nominees must be assigned (a) Occupational series: Selected 0800 and 1300; (b) Grade: GS-07 and above; (c) Prior courses: Hydrologic Modeling with HEC-HMS (#178) and Steady Flow with HEC-RAS (#114) or equivalent knowledge; and (d) Familiarity working in a Windows-based computer system environment. Hydrologic Modeling HEC-HMS and Steady Flow HEC-RAS input will not be covered. Prior experience with unsteady flow routing is recommended.

HISTORIC STRUCTURES I

392 Length: 36 Hours 35HIS01A
CEUs: 2.8 PDHs: 28 LUs: 28
Tuition: $1650

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.

HTRW CONSTRUCTION INSPECTION

141 Length: 24 Hours 56HCI01A

Tuition: $3190

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). Areas of chemistry, health and safety, and environmental regulations are covered in summary level-the course emphasis is on the Quality Management Process.

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, extraction and treatment of groundwater, excavation/on-site treatment of soil, collection and disposal of wastes, underground storage tank management, and geosynthetics applications; (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. A site visit is tentatively planned, subject to availability and proximity of sites to the classroom site.

Prerequisites.

This course is for working level and management personnel with a current or projected assignment in the USACE HTRW program.

HVAC CONTROL SYSTEMS: DESIGN & QV

340 Length: 36 Hours 35HVC01A
CEUs: 3.1 PDHs: 31
Tuition: $1330

Purpose.

This course is intended for HVAC control system designers and Quality Verification (QV) construction staff 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, as specified in UFGS-15951 and UFGS-13801, 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, systems, and drawings
(3) Calculations, sizing, selections, and setpoints
(4) DDC software packages and requirements
(5) LonWorks; technology, terminology, devices,functions,architecture, system networking,interfaces,and LonWorks Network Services (LNS)
(6) LonWorks points schedule drawing requirements
(7) UMCS supervisory functions and operator interface requirements (graphical display, alarms, scheduling, trending)
(8) Project implementation
(9) Project quality verification and inspection
(10)HVAC controls commissioning
(11)LonWorks multi-vendor product support and availability
(12)LonWorks hardware/software demonstration
(13)Base-wide UMCS/DDC master planning

Prerequisites.

Basic understanding of HVAC system types and functions.

HVAC CONTROL SYSTEMS: O&M

246 Length: 36 Hours 72HOM01A
CEUs: 3.1
Tuition: $1850

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.

HVAC DESIGN: BASIC

391 Length: 36 Hours 35BHV01A
CEUs: 3.3 PDHs: 33
Tuition: $1710

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) HVAC system sizing and layout; (g)HVAC system design and construction criteria sources; (h) building insulation and U-value determination; (i) energy conservation criteria including ASHRAE 90.1 conformance; (j) noise and vibration considerations, and (k) 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 technician with limited or no design experience. The course provides an overview of HVAC design topics for individuals responsible for design, construction, or operation of HVAC systems.

HVAC SYSTEMS COMMISSIONING

327 Length: 36 Hours 35MSC01A
CEUs: 3.0 PDHs: 30
Tuition: $1620

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, or equivalent; (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 Mechanical QV PROSPECT Course, #074, or have experience in mechanical quality assurance equivalent to the basics presented therein. Engineers are exempt from these requirements.

HVAC SYSTEMS TA&B-QV

68 Length: 36 Hours 35TAB01A
CEUs: 3.0 PDHs: 30
Tuition: $2010

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, or equivalent. Five years of quality assurance experience as a mechanical technician or general quality assurance representative is recommended.

HW MANIFEST/DOT CERTIFICATION

223 Length: 36 Hours 56HWM01A
CEUs: 3.4
Tuition: $1880

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 hazmat, focusing upon 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 an ISEERB approved and DoD approved course as per DoD 4500.9-R, Oct 99. It has been reviewed by subject matter experts from DOD components and found to be suitable for more than one agency. (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 notifications, 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, and general security awareness training. 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: 0800, 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 Installation environmental staff, 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.

HW MANIFEST/DOT RECERTIFICATION

429 Length: 16 Hours 56HWR01A

Tuition: $ 770

Purpose.

This 16-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 hazmat, focusing upon 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 an ISEERB approved and DoD approved course as per DoD 4500.9-R. It has been reviewed by subject matter experts from DOD components and found to be suitable for more than one agency. (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, and general security awareness. 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:0800 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.) as well as all Installation environmental staff, 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, 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.

HYDRO CONST MITI WET

440 Length: 32 Hours 33HCM01A

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.

HYDRO DATA MANAGEMENT WITH HEC-DSSVUE

152 Length: 36 Hours 54MDH01A

Tuition: $1880

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.

HYDROGRAPHIC SURVEY TECHNIQUES

56 Length: 40 Hours 35HST01A
CEUs: 3.0 PDHs: 30
Tuition: $2470

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, survey vessel operators, 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 technology used to conduct hydrographic surveys. The instructional program emphasizes the processes required to most effectively perform hydrographic surveys. 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, GPS positioning, LIDAR, and project planning. Some horizontal and vertical measurement concepts and techniques will be demonstrated in the field.

Prerequisites.

Nominees should 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.

HYDROLOGIC ANALYSIS FOR ECOSYSTEM RESTORATION

161 Length: 36 Hours 33RAW01A

Tuition: $1940

Purpose.

The primary objectives of the course are to provide participants with an understanding of the role of hydrologic engineering in ecosystem restoration studies and to provide experience in the application of several software tools that can be used to perform the hydrologic analyses common in restoration planning.

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, 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 restoration. The course agenda includes a series of increasingly difficult topics and workshops, beginning with principles of hydrology, ecology, and statistics and advancing to time series analysis, hydrologic alteration, ecosystem flow definition, ecosystem functions modeling, river hydraulics, and sedimentation. Over a third of the week will be dedicated to software demonstrations and workshops where course participants gain experience using a number of different software tools.

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, biologists, economists, sociologists, ecologists, or study managers.

HYDROLOGIC ENGINEERING FOR NON-ENGRS

57 Length: 36 Hours 35HEP01A

Tuition: $2340

Purpose.

This course provides an overview for understanding of basic hydrology and hydraulics concepts and their application in water resource studies and projects.

Description.

This course provides participants with a conceptual understanding of hydrograph analysis, fluvial hydraulics, frequency analysis, risk analysis, reservoir studies, groundwater and conjunctive use, flood warning systems, and ecosystem restoration modeling. This course is intended for professionals engaged in planning or project management who have a limited background in the basic principles of hydrology and hydraulics and their application in studies.

Prerequisites.

Nominees should be non-engineers with planning, project management, other technical specialties or supervisory experience and job duties with a need for understanding hydraulic and hydrologic processes and their relationships to civil works projects and studies. Nominees should possess some existing degree of experience or familiarity with fundamental hydraulic and hydrologic processes. Potential students completely unfamilar with these topics might consider Course #409 - "PCC5 H&H Considerations for Planning" instead.

HYDROLOGIC ENGR APPLICATIONS FOR GIS

219 Length: 36 Hours 35GIS01A

Tuition: $2030

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 ArcGIS 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. ArcGIS application experience would be desirable. Student should be in a position to apply GIS methods in the near future.

HYDROLOGIC MODELING WITH HEC-HMS

178 Length: 36 Hours 35HAF01A

Tuition: $1850

Purpose.

This course provides instruction in the use of the Corps' Hydrologic Modeling System (HEC-HMS) for flood damage reduction. Workshops are used to provide hands-on reinforcement of scientific and engineering principals presented in lectures. Students will be prepared to work on typical flood damage reduction studies after completing the course. These same skills are also used as a starting point for studies in ecosystem restoration, forecasting, and navigation.

Description.

The course covers basic hydrologic engineering techniques for rainfall-runoff analysis in support of flood damage reduction studies. Topics include: basin average rainfall estimation, infiltration determination, unit hydrographs, streamflow routing, and methods for modeling runoff throughout a watershed composed of multiple subbasins and river reaches. Parameter estimation using optimization and reservoir outflow modeling are also included. Workshops provide hands-on reinforcement for these areas while following from start to finish a sample reservoir study typical of many flood damage reduction projects. Teaching of scientific and engineering principles of hydrologic studies is integrated with learning to use HEC-HMS as a tool.

Prerequisites.

Prerequisites: Nominees should have completed a college-level hydrology course. Nominees must be assigned (a) Occupational Series: 0400, 0800, and 1300; (b) Grade: GS-07 or above.

INSTALLATION OUTGRANT INSTRUMENTS

925 Length: 36 Hours 49IOI01A

Purpose.

This is a intermediate level Installation training course for Real Estate and Real Property Action Officers with some experience and knowledge of fundamental principles of federal real estate.

Description.

This training is presented from the installation point of view. Installation documentation to complete Real Estate and Real Property Actions is the main focus of this training. This course covers the leasing process from determining available space or facilities for outgranting, to negotiating the outgrantg and administering the outgranted property. The course teaches the skills necessary to become proficient at outgranting, including legal authorities, strategies, and required forms. Students learn how to identify available space, prepare Reports and Notices of Availability, negotiate with prospective outgrantees, determine appropriate outgrant terms, and administer outgrants for continuing compliance. The course also covers environmental and historical considerations, forms of consideration, and working with other staff elements in the outgranting process.

Notes. Topics that are addressed within the course include; Legal Authorities and Regulations for Outgranting, Availability Issues and General Outgranting Policies, Preparation of Reports of Availability, Environmental Issues in Outgranting, Permits and Licenses, Easements and Rights of Way, Leases, Enhanced Use Leasing, Inter-Service Support Agreements and Other Outgrant-like Documents, and Compliance and Termination of Outgrants.

Prerequisites.

This is a intermediate level Installation Real Estate and Real Property Action Officer Course. Candidates should have taken Principles of Federal Real Estate or Installation Real Property Documentation, or have skills and abilities commensurate with that level of knowledge. Target grades are Job Series 1170, Realty Specialists, GS-7 through GS-11. Target grades for non-realty specialists are GS-9 and above.

INSTALLATION REAL ESTATE MANAGEMENT

920 Length: 36 Hours 49IRM01A

Purpose.

This is a intermediate level Installation training course for Real Estate and Real Property Action Officers with some experience and fundamental knowledge base of federal real estate principles.

Description.

This training is presented from the installation point of view. Installation documentation to complete Real Estate and Real Property Actions is the main focus of this training. This course provides real estate action officers with the skills to participate in the planning process and perform myriad real estate tasks simultaneously. Students develop the ability to define overall installation mission objectives. Students review the process for each type of basic real estate action and the necessary steps to complete the action process. Instruction covers using the correct documentation, assembling a real estate action team, providing project management, and providing commanders with a planning and execution staff for real estate actions through growth or reduction.

Notes. Topics that are addressed within the course include; Understanding and Defining the Mission Objective, Understanding Real Estate Action Processes, Environmental Issues, Assembling a Real Estate Process Team, Justification of Training Lands and Facilities, Understanding Real Estate Accountability, Understanding Real Estate Management, Introduction to Enhanced Use Leasing, and Understanding Real Estate Disposal.

Prerequisites.

INTERPRETIVE SERVICES

72 Length: 24 Hours 53INT01A
CEUs: 2.0
Tuition: $1110

Purpose.

This course is intended for those employees in natural resources 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 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.

INTERPRETIVE SERVICES FOR MGRS, SUPV & TEAM LDERS

70 Length: 32 Hours 53ISM01A

Tuition: $2310

Purpose.

This course is primarily intended for employees in natural resource management career fields and others who have interpretation, public outreach, or related job responsibilities at a management, supervision or team leadership level. The overarching objective of this class is to use interpretation as a tool to support project management and other missions of the Corps and make the other tasks performed by Corps employees more efficient. Partnerships, environmental compliance, natural resource management, recreation, visitor and employee safety programs may all become more effective through interpretation.

Description.

After completing the course, the student should be able to develop, manage, supervise, and lead an effective interpretive services program.

Topics to be covered in the course include:

a. Interpretive planning, incorporating interpretation in the project management process (Operational Management Plans, Project Management Plans, etc.

b. Partnering, Cooperative Associations, volunteers, etc.

c. Developing and evaluating interpretive programs, products, and facilities

d. Training interpretive personnel

e. Contracting interpretive products and services, business management

f. Developing exhibits and other interpretive media, interpretive writing

g. Use of technology

h. Planning special events

i. Dealing with barriers to access and communication

Prerequisites.

a. Occupational series 023, 025, 028, any 0400 series, (YB, YC, YD) levels 1-3), 023, 2210 at the team leader, supervisor, or manager level.

b. Completion of the Corps of Engineers Interpretive Services PROSPECT Course (#072), or the National Association for Interpretation Certified Interpretive Guide Course, or the National Park Service Interpretive Development Program or equivalent to any of above.

c. Or Bachelor's degree or higher in interpretation or two years of experience as a field interpreter.

IT FOR PUBLIC WORKS MANAGERS

984 Length: 32 Hours 54PBI01A

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.

Nominees must have taken the 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, and Deputy Commanders.

LEADING IN A LEARNING ORGANIZATION

34 Length: 28 Hours 21HR401A

Tuition: $1360

Purpose.

To develop a shared understanding of leading in a learning organization culture and what is required for that culture to exist and why that culture is necessary for the Corps to achieve the long-term goals that have been established.

Description.

The Corps' intent is to develop leaders at all levels that are capable of leading the Corps now and into the future. "Leaders at All Levels" requires a shared understanding of effective leadership that is not vested in positional power, but is created through interactive and collaborative relationships. This course helps learners to understand why today, and tomorrows, knowledge and service work requires a more holistic type of leadership at every level within the Corps. The course also explains the importance of identifying and developing the type of leadership necessitated by the challenges, strategic direction, values and vision of the Corps, particularly as they relate to achieving the strategic goals that have been established. Learners will explore their assumptions about leadership and learn the importance of enhancing strengths while mitigating rather than repairing weaknesses. They will also learn about their own individual strengths as potential leaders and the importance and advantages of strengths-based development for organizational success. Based on continuous personal improvement and continual organizational change, participants will learn the elements of improved leadership: character (including talent themes), maturity, knowledge and skills, and the continuous learning needed to be effective leading within a learning organization culture. Many leader-development programs today fail to distinguish between knowledge, skill or character development, and many miss systematic leadership and organizational learning entirely. This course will focus on the interrelationships between context, logic, maturity, character, knowledge, skills, organizational learning, effectiveness, and innovation, and the principles of a culture of discipline.

Prerequisites.

Nominees may be employees in Grades GS/GM 11-15 serving in, or anticipating serving in, a leadership role.

LUBRICATION OF MECHANICAL EQUIPMENT

412 Length: 30 Hours 35LME01A

Tuition: $2230

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.

MAINTENANCE AND REHABILITATION OF PAVEMENTS

50 Length: 36 Hours 35FPC01A

CEUs: 2.9 PDHs: 29

Tuition: $1460

Purpose.

This course teaches methods and techniques for maintenance and rehabilitation of flexible, rigid, and unsurfaced pavements.

Description.

This course focuses on practical and effective maintenance and repair methods and techniques. The course is composed of lectures, videos, handout materials, and field demonstrations. Maintenance and rehabilitation topics of both flexible and rigid pavements covered include repair techniques, material properties and mix design, surface maintenance options, joint and crack sealants, recycling, production, placement, compaction, and case studies. Additionally, a background in lab tests and field identification of soils and bases materials, maintenance and repair of drainage structures, dust control, and gravel roads will be provided.

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.

MANAGEMENT OF HYDROPOWER-O&M

376 Length: 36 Hours 35MHO01A

Tuition: $2260

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 subject matter experts in a lecture format, this course covers the management of Corps of Engineers hydroelectric generating stations. It includes the descriptions of powerhouse equipment deisign and construction for structural, mechanical, and electrical systems. It considers environmental requirements, power system accounting, maintenance management, power system operation, safety consideration, material flow, benchmarking, and control systems. Prospective students should be managers or prospective managers of Corps of Engineers hydroelectric assets.

Prerequisites.

Nominees must be assigned (a) Occupational Series: 0025, 0100, 0400, 0800, and 1600; (b) Grade: GS-09 equivalent 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.

MASONRY STRUCTURES DESIGN

317 Length: 36 Hours 35MSD01A

Tuition: $2010

Purpose.

This course familiarizes the engineer with design and construction practices including criteria, procedures, and specifications for masonry structures. The course instructs DoD engineering personnel in the techniques of masonry design and construction utilizing UFC 3-310-06 "Masonry,Design for Buildings" and the IBC. Seismic issues related to masonry will be addressed, based on UFC 3-310-04,and other pertinent literature. A large portion of Army buildings include masonry as a building unit. Proper design is necessary to eliminate construction and maintenance problems and be cost effective.

Description.

Topics include (a) masonry materials, properties, and testing; (b) design loads; (c) strength design of reinforced masonry; (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; and (k) quality assurance. After taking this course the structural engineer should be able to design a cost effective building that incorporates the latest masonry technologies to produce a building with the required structural integrity. The manuals to be used are UFC 3-310-06, "Masonry Design for Buildings", IBC 2003, and other Corps manual and referenced national guidance and standards.

Prerequisites.

Nominees must be assigned (a) Occupational Series: Selected 0800; Grade: GS-07 or above or equivalent. Nominees should be engineers with masonry design or construction responsibilities. Course is open to Air Force and Navy personnel.

MECHANICAL--QV

74 Length: 36 Hours 35MCQ01A
CEUs: 3.2 PDHs: 32
Tuition: $1280

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, or equivalent. 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.

MII ADVANCED

312 Length: 36 Hours 54MGA01A
CEUs: 2.8 PDHs: 28 LUs: 28
Tuition: $1360

Purpose.

This course provides cost engineering professionals with advanced instructions on accessing and utilizing the components of the MII software program not provided in the MII Basic course. The course presents detailed information on: (a) Military Programs, Civil Works, Environmental and modeling; (b) Crew Productivity Analysis for Civil Works; (c) Military Program, Civil Works and Environmental Work Breakdown Structures; (d) Management of MII Libraries, assemblies and tables, and (e) Other Advanced Cost Engineering Tools.

Description.

The course provides instruction on the use of modeling and quantity linking for the development of budget estimates, 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.

(1) Students must be assigned (a) Occupational Series: Selected 0800, 0802, 0810, 0830, and 0850; (b) Grade: GS-09 and above; (2) This course is open only to DoD personnel. Other participants must obtain CECW-CE approval and may be permitted to attend only on a last priority basis; (3) Students should have a decent working knowledge of (a) MII and should have taken the MII Basic and Cost Estimating Basics PROSPECT courses prior to this training, (b) Excel, particularly the use of ranges and if/then statements, (c) cost engineering, its rules and regulations, and (d) computer operations using the current Microsoft Windows operating environment.

MII BASIC

305 Length: 36 Hours 54MCA01A
LUs: 36
Tuition: $1065

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. The 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 hands-on computer usage, this course covers the basic computerized aspects of estimating using the latest version of MCACES (MII), the latest CostBook (UPB) and other supporting libraries (i.e., 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) Students must be assigned (a) Occupational Series: Selected 0800, 0802, 0810, 0830, and 0850; (b) Grade: GS-07 and above; (2) The course is open only to DoD personnel. Other participants must obtain CECW-CE approval and may be permitted to attend only on a last priority basis; (3) Students should have at least a basic working knowledge of (a) cost estimating (it is highly encouraged for students to have taken Cost Estimating Basics PROSPECT course prior to this training) and (b) computer operations using the current Microsoft Windows operating environment; (4) Previous exposure to MCACES (MII) software programs is helpful; (5) Students should bring a calculator with them.

NATIONAL ELECTRICAL CODE

78 Length: 36 Hours 35NEC01A
CEUs: 3.0 PDHs: 30
Tuition: $1470

Purpose.

This course increases the proficiency of the electrical engineer and the electrical technician in designing interior systems which meet the requirements of the "National Electrical Code" (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, grounding and bonding, motor and transformer circuits, calculations, ground - fault circuit interrupters, classified (hazardous) areas, special conditions, and use of tables.

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.

NATIVE AMERICAN PERSPECTIVES AND CORPS MISSIONS

950 Length: 32 Hours 33NAE01A

Tuition: $2370

Purpose.

This course identifies sustainable environmental principles through immersion in a culture different than one's own and exposes students to practices that have enabled Native Americans to thrive for thousands of years. Concepts and principles examined provide project and program managers with an expanded range of alternatives to consider when planning and implementing Corps activities.

Description.

The course is founded on the USACE Environmental Operating Principles: achieve sustainability, recognize interdependence, seek balance, accept responsibility, mitigate impacts, build and share knowledge, and positively seek ideas to find solutions.

Elements and concepts that students are exposed to in this training will influence planning, decision-making and implementation of USACE projects and programs. Leadership and team-building skills are an added benefit. Students build skills through interactions with Tribal members, hands-on activities, and cooperative efforts in a remote setting. The remote setting enables students to "think outside the box," away from the office and routine daily tasks. Students gain a fresh perspective on interdependencies among natural resources and human activities, and on the enormous importance of maintaining the web of sustainability.

Lessons learn aid in all aspects and phases of environmentally beneficial water resource programs and projects, installations, and overseas operations. Students are challenged to apply lessons learned to Corps mission areas.

Prerequisites.

This course is vital for individuals engaged in environmental decision-making at all levels and in all areas - leaders, planners, project managers, operations staff, real estate and regulatory specialists, public affairs, office of counsel, environmental engineers, scientists, park rangers, civil engineers, and others engaged in water resource programs/projects. Employees from the GS-7 to SES level and military classifications O3 to O6, as well as other federal and state agencies, have benefited from the course already.

Notes.

Lodging (Tipis or similar accommodations) and meals are included in tuition. Students will be provided a list of what to pack.

NEG CONST CONT MODS

368 Length: 36 Hours 41NCC01A

CEUs: 2.5 PDHs: 25 LUs: 25

Tuition: $1030

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 GS-05 or above or equivalent NSPS; (b) Grades: Military: 0-3 and above; Civilian: GS-07 or 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.

O&M CONTRACTS

119 Length: 28 Hours 41OMC01A
CEUs: 2.6 PDHs: 26
Tuition: $ 880

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.

O&M CONTRACTS ADV

318 Length: 32 Hours 41OMA01A
CEUs: 1.8 PDHs: 18
Tuition: $1550

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). Students should attend sessions outside their home Division in order to receive full benefit of class field trip.

OMBIL APPLICATIONS FOR MANAGERS

160 Length: 28 Hours 46OMB01A
CEUs: 2.3 PDHs: 23
Tuition: $1430

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 six major Corps business functional systems (navigation, hydropower, recreation, water supply 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 budget analysts,or operations, program, or project managers involved with navigation, hydropower, recreation, water supply, 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.

OPERATIONS MANAGEMENT

245 Length: 36 Hours 46OMW01A

Tuition: $1030

Purpose.

This course is targeted toward US Army Corps of Engineers employees who aspire to become Operations Project Managers (OPMs). It is taught by existing or former OPMs and national business program managers from a practical management perspective. It is intended to foster a uniform understanding of current programmatic changes, issues, and initiatives in both individual business line areas and general management practices.

Description.

This course is designed to provide students with insight into functioning as an OPM in the areas of the project management business process, budget preparation and execution, communities of practice, human resource management procedures, specific leadership skills, and union/management relations. It also covers individual business lines such as hydropower, flood damage reduction, recreation, navigation, environmental stewardship, and others from both an OPM's and a national perspective. An entire day of this course takes place in the USACE HQ office, exposing students to national senior leaders and program experts.

Prerequisites.

Nominees must be: (a) US Army Corps of Engineers employees: (b) Grade GS-11 or above; and (c) be directly involved in or experienced in the operation and maintenance of USACE operational projects. First consideration will be given to high potential aspiring OPMs who have been so identified by their command.

PAINT COATINGS AND QA

84 Length: 36 Hours 35PNT01A
CEUs: 3.1 PDHs: 31 LUs: 31
Tuition: $1610

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, and its application to the design-build process.

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.

PAVEMENT EVALUATION DESIGN

115 Length: 60 Hours 75PER01A

Tuition: $1450

Purpose.

This course teaches method and techniques for the evaluation and design of flexible, rigid, and unsurfaced pavements.

Description.

Through lectures, laboratory tours, field exercises, and discussions, this course covers the general concepts in pavement evaluation and design, selection of pavement system, design procedures, and computer applications. Specific topics include identification of surface deficiencies, PAVER, pavement management systems, field tests of soil, bases, and asphalt layers, rigid, flexible, and unsurfaced pavement design, overlay design, surface and subsurface drainage, and an overview of PCASE. Students are encouraged, but not required, to bring a laptop so that the PAVER/PCASE software can be installed and used during the course.

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 be a senior technician responsible for pavement evaluation, maintenance, rehabilitation, or construction.

PCC 7 PUBLIC INVOLVEMENT & TEAM PLANNING

407 Length: 36 Hours 35CPL01A

Tuition: $1540

Purpose.

Corps of Engineers planners typically work in multi-disciplinary teams, often involving project sponsors, other federal and state agencies, and occasionally stakeholder groups or private individuals. These teams, in turn often consult with a broader public, identifying and addressing public concerns as the agencies proceed through the planning process. This environment requires skills for successfully designing and conducting processes that effectively draw together the different partners and stakeholders throughout the planning process, resulting in decisions that enjoy broad public support.

Description.

This course will concentrate on the methods, techniques, and skills which assist Corps planners and project managers with developing a high-functioning team and maintaining effective communication with sponsors, stakeholders and interested parties throughout the life of the study. Participants will learn ways to effectively consult with or include others in raising awareness of on-going studies and efforts, integrating stakeholder values and concerns into the formulation and evaluation of projects, managing conflicts and disputes, and developing strategies to align participation activities with the Corps 6 Step Planning Process. By the end of this course the student will be able to identify the characteristics of effective public involvement processes, facilitate a team or public meeting, design an interactive team or public meeting or workshop, identify behaviors that escalate conflict during a dispute with other agencies or the public-and identify behaviors that halt this escalation, develop a public participation plan, and select appropriate techniques for a participatory process.

Prerequisites.

Nominees should be assigned to the Planning and Project or Program Management Components of the civil works planning programs or are currently assigned to a planning study team. Some basic working knowledge of the Corps Six Step Planning Process and Civil Works mission areas is preferred. Priority will be given to Civil works team members in the Planning function having 3 or less years of planning experience. Grade level: GS-5 through GS-11.

PCC1 CIVIL WORKS ORIENTATION

86 Length: 32 Hours 35PWR01A

Tuition: $1210

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: overviews 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 all phases of civil works project development, project 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. This course is highly recommended as the first training class for new or entry level employees in the CW Planning function.

PCC2 PLANNING PRINCIPLES AND PROCEDURES

77 Length: 36 Hours 35PPP01A

Tuition: $1290

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, the 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, "PCC1 Civil Works Orientation" is highly recommended. Priority will be given to GS5-GS12 students with less than 3 years of current planning experience.

PCC3 ENV CONSIDERATIONS

408 Length: 36 Hours 35ECP01A

Tuition: $1980

Purpose.

This class surveys environmental topics needed for new planners to pursue civil works planning studies. Participants learn to recognize the basis for and key components of NEPA documents consistent with applicable environmental laws, regulations and procedures necessary to conduct civil works planning studies. Students will also receive basic information regarding the Corps ecosystem restoration authorities and guidance on partnership development. Course includes field trip and experiential exercises to demonstrate and apply course learnings.

Description.

The class consists of a series of modules summarizing the many laws, regulations, and planning processes governing environmental aspects of the Corps of Engineers civil works planning process. Modules include an overview of the process and its relationship to compliance under the National Environmental Policy Act, and the contents and procedural requirements for the preparation of Environmental Impact Statements. Regulatory discussions address the: Endangered Species Act, Fish and Wildlife Coordination Act, National Historic Preservation Act, Clean Water Act, Clean Air Act, Coastal Zone Management Act, Magnuson-Stevens Fishery Management Act, and the Wild and Scenic Rivers Act. Other topics include mitigation, cost effectiveness analysis, environmental sustainability, and guidance on ecosystem restoration under the continuing authorities and general investigation programs. Ecosystem and other impact assessment methods are reviewed, with exercises focused on the selection of assessment procedures for wetland evaluations.

Prerequisites.

Nominees should be newly assigned to the Planning and Project or Program Management Components of the civil works planning programs with planning experience of less than 3 years or in fields having a nexus with a need for an understanding of environmental considerations in the planning process. Grade level: GS-5 through GS-11. Preference will be given to students who have completed the PCC1 Civil Works Orientation course and the PCC2 Planning Process and Principles Course or equivalent.

PCC4 ECONOMIC ANALYSIS

270 Length: 36 Hours 35EAW01A

Tuition: $1540

Purpose.

This course provides an overview of the requirements and procedures for conducting economic analysis of Corps of Engineers water resources planning projects. Some form of economic analysis is mandatory for all Civil Works projects, whether they involve flood risk management, navigation, dredging, water supply, environmental restoration, mitigation, major rehabilitation, O&M, or multiple project purposes. While the course focuses on the technical elements of Corps economics, large blocks of time are allotted for policy and procedure, as they intertwined.

Description.

Economic policies, methods and tools will be presented for each project purpose through a series of seminars, lectures, hands-on exercises, and case studies. Other concepts covered by this course include: the NED account as defined by the P&G; incorporating Risk & Uncertainty into evaluation by project purpose; types of evaluation techniques (cost-benefit analysis, optimization analysis, cost effectiveness/incremental cost analysis); types of data required; analytical models routinely used by planners and economists; the role of economic analysis in environmental restoration, mitigation, watershed planning; cost sharing; and the renewed emphasis on the Regional Economic Development (RED), Other Social Effects
(OSE) accounts. Many of the presenters will be made up of experts well-versed in Corps economcs as well as policy. In addition, the proximity to HQUSACE and IWR provides a perfect venue for the class.

Prerequisites.

This course is strongly recommended for economists; however, planners and project managers are encouraged to attend. It is one of several Core Curriculum Courses making up the Corps' Planning Excellence Program.

PCC5 H & H CONSIDERATIONS FOR PLANNING

409 Length: 32 Hours 35HHC01A

Tuition: $2170

Purpose.

This course provides less experienced district and division planners with a basic overview of the Corps of Engineers basic hydraulic and hydrologic concepts in accordance with current policies and procedures. It is developed for those who are relatively new to civil works planning; or, individauls who require an overall understanding of the policies and procedures involved in hydraulic and hydrologic process.

Description.

Formerly the Planner Core Curriculum Class entitled "Hydrologic and Hydraulic Considerations in Planning." This course provides basic information in layman's terms on hydraulics, hydrology, geomorphology, sediment transport, and associated models. Many hands-on demonstrations are utilized to reinforce these concepts. The concepts are then specifically applied to the Corps water resources mission areas of flood damage reduction, coastal damage reduction, navigation, ecosystem restoration, etc. In addition, the course provides a discussion of the development of Project Management Plans and scope versus consequences and includes a field trip and a major class exercise. The target audience for this class is new planners with no formal education in hydraulics and hydrology. While engineers may take this class, it should be recognized that basic principles will be discussed.

Prerequisites.

Nominees should be beginning/newly assigned to the Civil Works Planning and/or Project or Program Management areas of the civil works planning programs. Typically, with less than 3-years of related hydraulic and hydrologic experience; or, in fields having a nexus with and relevant need for an understanding of the hydraulic and hydrologic processes and their relationships to civil works project development. Nominees should be currently involved in the planning of civil works water resources development projects. Prior completion of the "Planner Orientation" and "Planning Process" courses from the Planning Core Curriculum; or, the "PCC1 Civil Works Orientation" and "PCC2 Planning Principles and Procedures" PROSPECT courses is highly recommended. Grades: GS 5-11.

PCC6 PLAN FORMULATION

406 Length: 32 Hours 35PFM01A

Tuition: $1630

Purpose.

This course provides less experienced district and division planners with a basic overview of the Corps of Engineers plan formulation process in accordance with current policies and procedures. It is developed for those who are relatively new to civil works planning; or, individuals who This course contains one or more field trips and several experiential classroom and field exercises to reinforce application of course learnings. require an overall understanding of the policies and procedures involved in the plan formulation process.

Description.

Basic student learning objectives for this course include general understanding of the plan formulation process; the steps of plan formulation and how plan formulation fits within the six-step planning process. Multipurpose plan formulation strategies and approaches for ecosystem restoration, flood damage reduction, navigation and true multipurpose application is covered and discussed through a series of presentations; and, various class, group and individual exercises. Presentations and class exercises also include a field trip based case study(s) designed to provide experiential learning through application of the plan formulation process, plan formulation strategies, guidance and policy. The course is conducted in an informal atmosphere to encourage class interaction.

Prerequisites.

Nominees should be beginning or newly assigned to the Civil Works Planning and/or Project or Program Management areas of the civil works planning programs. Typically, with less than 3-years of related plan formulation experience; or, in fields having a nexus with and relevant need for an understanding of the plan formulation process and its relationships to civil works project development. Nominees should be currently involved in the planning of civil works water resources development projects. Prior completion of the "PCC1 Civil Works Orientation" and "PCC2 Planning Principles and Procedures" PROSPECT courses is highly recommended. Priority will be given to students in Grades: GS-5 through GS-11.

PLANNING FOR ECOSYSTEM RESTORATION

348 Length: 36 Hours 33EBE01A

CEUs: 3.1

Tuition: $1880

Purpose.

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

Description.

Within the context of the six-step planning process [(1) identify 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] 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
- Fundamentals of ecological principles and processes
- 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

(NOTE: Although this course addresses evaluation tools and procedures for ecosystem restoration planning, this is not a course in the theory/mechanics of ecological or habitat models such as HEP or HGM.)

OBJECTIVES. Upon completion of this training, attendees will be able to: (a) list important authorities related to planning and ecosystem restoration; (b) list and describe 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; (e) explain some fundamental ecological principles and their use in planning, and; (f) conduct a simple cost effectiveness and incremental cost analysis for an ecosystem restoration project.

The course will include a half-day field trip to a local Corps restoration project, and student teams will be responsible for developing and presenting a case study based on the field visit.

Prerequisites.

Prerequisites: This course is designed for Corps personnel involved in planning and designing, and evaluating environmental restoration projects, including planners, biologists, economists, engineers, outdoor recreation planners, landscape architects, project managers and other planning team members. Recommended grade of GS-09 or above.

PROJECT MANAGEMENT - MIL PROG

88 Length: 36 Hours 46PMM01A
CEUs: 3.1 PDHs: 31 LUs: 31 PDUs: 31
Tuition: $1320

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. Additionally, this course provides the other technical members of the project delivery team, including supporting budget, scheduling, contracting, and legal specialists an overview of the military construction process and procedures.

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. Course focus is on Military Construction (MILCON) process, application of Project Management Business Process (PMBP), and Project Management (PM) principles. The Army MILCON (MCA) process is used as a model. Other programs are covered in general and by analogy. 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.

PROJECT TEAMBUILDING

383 Length: 36 Hours 15PTL01A

Tuition: $2970

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.

This course profiles the successful project manager and discusses project leadership in a matrix environment within a government organization, stressing proactive personal leadership and networking as well as using personal and organizational currency in order to influence without authority.

The course covers:
(1) leadership styles
(2) building and leading high-performing project teams; recognizing and understanding team dynamics; inspiring team success
(3) Understanding communication styles and developing and practicing communication skills
(4) Understanding and developing critical personal and interpersonal skills. A few topics covered under this objective are; receiving feedback in their leadership decision making style, enhancing skills in conflict management and practicing conflict resolution methods, managing relationships with customers, peers and bosses;
(5) Developing self-knowledge and emotional intelligence; understanding individual differences and personality types,
(6) Learning to develop networks to gain influence over important decisions

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.

PUBLIC INVOLVEMENT - COMMUNICATION

91 Length: 36 Hours 53PIC01A

Tuition: $1160

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.

PURCHASING GREEN

954 Length: 8 Hours

Purpose.

This class provides engineers, specification writers, contract administrators, and environmental personnel instruction on incorporating green purchasing into government contracting and meeting the requirements of mandatory Federal procurement preference programs.

Description.

The course covers the regulatory background for the mandatory Federal procurement preference programs (RCRA, Executive Orders, Federal Acquisition Regulations); EPA RCRA Inspections - what they will be looking for and how you can be ready; how to incorporate green purchasing into contracts - including a detailed discussion of the Federal Acquisition Regulations and the required contract clauses, finding example contract language, developing specifications to promote green purchasing; Comprehensive Procurement Guidelines (CPGs) and Recommended Recovered Material Advisory Notices (RMANs) - the 54 products Federal agencies are required to buy with recycled content; the mandatory biobased purchasing program and the proposed products list; where to find and how to order recycled-content and other green products; reporting and tracking of green purchases - what is currently being reported, using the DD 350, proposed reporting requirements, who needs to keep track of purchases and how; Environmentally Preferable Purchasing - discussion of other environmentally friendly attributes such as energy savings, water conservation, less packaging, reduction of hazardous content, and more. The classroom instruction includes lecture and slides, a group exercise, and a display of sample products. The instructors have taught green purchasing classes at over 50 military installations over the past 4 years and are winners of the 2001 White House Closing the Circle Award.

Prerequisites.

It is recommended that nominees be military or civilian employees that have some role in the contracting process such as specification writer, contracting officer, or contracting officer's representative. Personnel in environmental positions that have involvement in Environmental Management Systems, pollution prevention, or green purchasing would also benefit.

QAE/PI

978 Length: 32 Hours 54QAE01A

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.

RAD WASTE TRANSPORT/DOT RECERTIFICATION

430 Length: 20 Hours 56RTD01A

Tuition: $ 820

Purpose.

This 20-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.

RADIOACTIVE WASTE TRANSPORT

441 Length: 24 Hours 56RWT01A

Tuition: $1500

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 for recycling, treatment and/or disposal. 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. (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, EPA Superfund sites, and military installations. This workshop is focused on the DOT regulations associated with Class 7 and Class 9 radionuclides which includes ongoing DOT/NRC rulemaking for harmonization with international transportation regulations. 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, labeling, and packaging,determining the correct shipping paper requirements, and security awareness training. 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 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 (e.g. mixed wastes, friable asbestos).

RE ACQUISITION 101

79 Length: 36 Hours 49REA01A

CEUs: 3.0

Tuition: $1210

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.

RE ACQUISITION 201

121 Length: 24 Hours 49RA201A

Tuition: $ 990

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 resosurces projects.

Description.

The course includes lectures, class discussions, problem solving, and testing. Topics for presentation address (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 Partnership Agreements (PPA) 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. 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 and applicable Engineer Circulars.

RE DISPOSALS 202

76 Length: 24 Hours 49RM201A

Tuition: $1080

Purpose.

The real estate disposal mission of the Department of the Army has no counterpart private sector. The laws, regulations, and policies pertaining thereto are primarily peculiar to the Federal Government. This course provides an advanced overview of the Disposal portion of the management and disposal mission, policies, procedures and regulations for Army and Corps of Engineers projects, with emphasis on complex actions.

Description.

The course includes lectures, class discussions, problem solving, and testing. Topics for presentation address (a) authorities, documents, and procedures for various types of disposals, (b) environmental land use controls and documentation, (c) negotiation skills. After completion of this course, the student should have advanced to real estate 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 disposal functions within the Corps of Engineers. Individuals must have completed RE Management and Disposal 101, Course No. 007, 49RED01A, or have equivalent experience. 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 appropriate Engineer regulations.

RE INLEASING

102 Length: 36 Hours 49RAL01A
CEUs: 3.0
Tuition: $1360

Purpose.

The inleasing mission of the Department of The Army involves acquiring by lease buildings, building space, residential quarters, recruiting stations, and other real property required for military purposes. Emphasis of this course will be on the leasing of recruiting stations, being the largest volume of inleasing actions performed by the Corps of Engineers. This course will also address the requirement to manage and maintain non-recruiting and civil leases. It also 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 statutes and authorities, policies, procedures and regulations for the Corps of Engineers mission.

Description.

The course includes lectures, daily class discussions, daily practice exercises, a field trip to survey and evaluate potential leasing locations, and testing. Topics for presentation address (a) project planning, documents, and leasehold statutes and authorities, (b) general fundamentals of determinations of value for inleasing acquisition, (d) leasehold estates and forms, including mandatory and optional lease 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, EC 405-1-15, Acquisition by Leasing.

RE MGT AND DISPOSAL 101

7 Length: 36 Hours 49RED01A

Tuition: $1250

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.

RE MGT AND OUTGRANTS 201

73 Length: 24 Hours 49RMD01A

Tuition: $1060

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 portion of the management and disposal mission, policies, procedures and regulations for Army and Corps of Engineers, with emphasis on complex actions and outgrants.

Description.

The course includes lectures, class discussions, problem solving, and testing. Topics for presentation address (a) authorities, documents, and procedures for complex outgrants, (b) management of title, encroachments and boundary disputes, (c) environmental land use controls, compliance and documentation, (d) authorities, documents, and procedures for making property available for use by others, (e) complex outgrant document preparation, (f) outgrant management and administration, and (g) negotiation skills. After completion of this course, the student should have advanced to more advanced real estate management, 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 outgrant functions within the Corps of Engineers. Individuals must have completed RE Management and Disposal 101, Course No. 007, 49RED01A, or have equivalent experience. 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 appropriate Engineer regulations.

RE PROJECT MANAGEMENT & CONTROL(RE PM&C)

144 Length: 28 Hours 49RPC01A

Tuition: $1360

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 data validation 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 (g) 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 (and EC 405 Series), Chapters 1 (405-1-01), 2 (405-3-10), 3 (405-1-03), 13 (405-1-13), 14 (405-1-01) and 15 (405-1-01).

RE RELOCATION

193 Length: 28 Hours 49RRT01A

Tuition: $1490

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.

REAL PROPERTY ASSET MANAGEMENT

286 Length: 36 Hours 49RPM01A

CEUs: 2.7

Tuition: $1070

Purpose.

This course is designed as an introduction and overview to Army Real Property Asset Management as well as a means of providing Army Real Property personnel up-to-date information on changes and issues relating to the responsibilities, regulations, policies, and procedures of Army Real Property Asset Management from a HQDA perspective. The objective of the course is to provide an overall understanding for the new Army real property person and also to enhance the knowledge of the experienced person who performs functions related to Army Real Property Management.

Description.

This course provides the most up-to-date information on the life cycle of real property and its management through lectures, case studies, a field trip, group interaction and practical exercises. This course will provide the most current information on Army 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, environmental documentation, the McKinney Homeless Assistance Program, annexation, jurisdiction, encroachments, privatization, and automated management systems associated with Army real property management and accountability.

Prerequisites.

Nominees should include personnel both directly and indirectly associated with the management of Army real property, military and civil for all Army components.

Notes.

Students will be asked to bring their CAC card to the class for the field trip.

REAL PROPERTY MASTER PLANNING

75 Length: 36 Hours 46PMP01A
CEUs: 3.0 PDHs: 30 LUs: 30 CMs: 30
Tuition: $2020

Purpose.

This course is an introduction to REAL PROPERTY MASTER PLANNING for planners and Real Property Specialists at Army installations, Corps of Engineers district levels as well as planners from other DoD and Federal agencies. The goal of the course is to make planners more effective by providing them an overview of the installation real property master planning process that is used by not only the Army but also other DoD, Federal agencies as well as local cities and towns. 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 as well as civilian planning community.

Description.

Through lectures, case studies, group interaction, field trips and practical exercises, this course will (a) explain an overview of AR 210-20, Master Planning for Army Installations; (b) present the planning process/methodology in general and explain how it is applied to installation Real Property Master Planning; (c) explain the structure of the Army and its installations and how and where the facility planner fits into it; (d) emphasize that master planning is a professional capability requiring close collaboration and facilitation with stakeholders: (e) explain how to establish and manage the Real Property Planning Board; (f) emphasize realtime understanding on how to complete a site planning charette and (h) present an overview of sustainable development concepts.

Prerequisites.

Nominees must be assigned to GS-05 or above and associated with installation real property planning and management support functions at Army installation/communities, MACOMs, MSCs, USAR, RSCs, USACE divisions/districts, and/or a supporting contractor or equivalent experience from other DoD, and Federal Agencies. This course is open to the general public.

Notes.

Students should be advised that a field trip will require walking about 1-2 miles through a downtown area. Further, students are encouraged to bring their PC for group exercises however, it is not required. Students should minimize use of cell phones during the class. This class is accredited by the American Institute of Certified Planners. Students are awarded 30 certification maintenance credits upon completion.

REAL PROPERTY MASTER PLANNING SKILLS

326 Length: 36 Hours 46RMS01A
CMs: 31
Tuition: $2010

Purpose.

Master Planning Applied Skills provides a unique opportunity to learn how to use Army planning tools to conduct planning studies, requirements analyses, stationing impacts, etc. Through application and instruction, students will gain further understanding in the use of these tools.

Description.

Students will gain a thorough understanding of how the Army stations units and how to develop RP requirements and assess the impacts of this stationing. Students will use Planning tools such as ASIP and RPLANS to determine real property requirements and the impact to the installations RPMP.

Prerequisites.

This class is not a class to learn how to use RPLANS and ASIP, but rather how to use these tools to form a succinct definition of real property requirements, stationing scenarios and gap analysis. This course is open to the general public.

Notes.

This class is accredited by the American Institute of Certified Planners. Students are awarded 31 certification maintenance credits upon completion.

REAL PROPERTY SKILLS

150 Length: 36 Hours 46RPS01A

Tuition: $1420

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, Integrated Facilities System (IFS), and the basic knowledge of Army Military Real Property.

Description.

This course covers the life cycle of real property and how to use IFS to record it including the use of the DD Form 1354 and DA Form 337. Through lectures and hands-on computer exercises, the course covers the process and procedures for the accounting of Army Military Real Property, the management of Real Property/Real Estate and data input, and the use of IFS used to maintain the of Army Military Real Property. The course will provide 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 fundamental knowledge of Army Military Real Property/Real Estate.

REAL PROPERTY UTILIZATION

214 Length: 36 Hours 49SUM01A
LUs: 25

Tuition: $1030

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 real property and space utilization management within the U.S. Army. Information can be adapted and applied for use by other DOD Activities and Federal Agencies. This course has three focuses: (1) to train managers at all levels on how to determine organizational space allowances and requirements, (2)to plan and conduct utilization surveys; and (3) to identify ways to increase efficiency.

Description.

This course includes lectures, discussions, a field trip, and exercises which teach students to plan and manage facility space and to make necessary adjustments. Utilization will be adjusted through allowances and requirements analysis of organizations and facilities on the installation. The course also includes determining and improving space
utilization rates. Major topics include (a) life cycle of planning and use, (b) organizational allowances and requirements, (c) planning and conducting a utilization survey, (d) utilization 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 are normally 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.

Notes.

Students are asked to bring their CAC card for the field trip and a photo of their office space to class.

REGULATORY I

100 Length: 36 Hours 35RG101A

Tuition: $ 810

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.

REGULATORY IIA

322 Length: 36 Hours 35IIA01A

Tuition: $ 880

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.

REGULATORY IIB

323 Length: 36 Hours 35IIB01A

Tuition: $ 880

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.

REGULATORY IIC

370 Length: 32 Hours 35IIC01A

Tuition: $1020

Purpose.

This course provides in-depth discussion specific to permit evaluations associated with project proposals in coastal areas. It is designed to be complimentary to the Regulatory IIA and B curricula, not to replace them, providing regulators with the specific background necssary to effectively and efficiently evaluate projects proposing to impact coastal aquatic resources. Previously, this information was included in Regulatory IIA and IIB; however, as the Regulatory program increases in complexity, it is necessary to devote additional time to specific areas, such as Essential Fish Habitat and Endangered Species Act coordination and consultations, coastal processes.

Description.

The course will provide a comprehensive background related to coastal issues, focusing on goastal geomorphology and processes, regulatory authorities in a coastal context, dredging, coastal jurisdiction and delineation, Essential Fish Habitat/Endangered Species Act coordination and consultation, historic use of coastal areas, seal level rise, and mitigation.

Prerequisites.

Supervisors, project managers, enforcement/compliance managers, journeyman-level regulators with a minimum of two years of experience in a grade level GS-07 and above.

REGULATORY III

325 Length: 32 Hours 35GR301A
CEUs: 2.9 PDHs: 29
Tuition: $ 880

Purpose.

This course prepares Regulatory Project Managers and Counsel 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. This course can also serve as an introduction to other federal agencies to the Corps Regulatory Program.

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.

REGULATORY IV

140 Length: 36 Hours 35RG401A

Tuition: $2200

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.

REGULATORY V

137 Length: 36 Hours 35RG501A

Tuition: $2390

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. After completing the course, students should be able to understand functional assessments, how to develop and use them, and their importance to the regulatory program.

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.

REGULATORY VII

436 Length: 24 Hours 35RG701A

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 FUNDAMENTALS

196 Length: 36 Hours 35RSF01A

Purpose.

Instruction is designed to introduce the students to the concepts of applied remote sensing using satellite and airborne imagery. This course combines informative lectures with hands-on lab exercises that provide an understanding of remote sensing and image processing as they are used for USACE Civil Works applications. Topics include: remote sensing applications for navigation, flood damage detection, environmental missions, wetlands and waterways, regulation and permitting, real estate, recreation, survey and mapping, emergency response, and research and development.

Description.

This course provides a background of the principles of remote sensing; an overview of sensor types; processing of multispectral, hyperspectral, radar, LIDAR, and digital elevation data; obtaining image data via the USACE data acquisition protocol; spectral signatures and libraries, integrating imagery with GIS and GPS data; map projection and geo-rectification; and information extraction through image classification.

Prerequisites.

The course is intended for Civil Works personnel involved with survey and mapping, navigation, real estate, environmental, hydrology, regulation and permitting, and emergency response. Hands-on computer participation is required for this course. The course is intended for both professional and technical level classifications. It is open to selected occupational series: 0400, 0800, and 1300; and Grades: GS-07 through 12.

RESERVOIR SYSTEMS ANALYSIS WITH HEC-RESSIM

98 Length: 36 Hours 35RSA01A

Tuition: $2110

Purpose.

This course provides participants with a capability to perform reservoir system studies using computer simulation to analyze reservoir system performance.

Description.

Reservoir simulation for flood control, water supply, hydropower and multipurpose operation is covered. The computer program, Reservoir System Simulation(HEC-ResSim) will be used for reservoir simulation problems. In addition to reservoir simulation by computer, the course covers topics related to developing flow data and systems demands, plus formulating and evaluating alternative reservoir system configurations and operation 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. In addition, it is strongly recommended that course participants be in positions where they will be involved in reservoir system studies within the next year or two.

RIPARIAN ZONE ECOLOGY/RESTORATION/MGT

281 Length: 36 Hours 33REM01A

Tuition: $2570

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.

RISK ANALYSIS FOR FLOOD RISK MANAGEMENT

209 Length: 36 Hours 33RBA01A

CEUs: 2.6 PDHs: 26

Tuition: $2030

Purpose.

This course introduces Corps of Engineers field office staff to risk analysis for flood risk management planning. Participants will know the methodologies for determining uncertanty in discharge, stage, and damage and how to evaluate project size and performance accounting for the uncertainity 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 analysis of typical flood risk management 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 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 levee certification 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).

RISK ANALYSIS-WRP&M

349 Length: 36 Hours 35RAW01A
CEUs: 3.1
Tuition: $2110

Purpose.

This course introduces concepts and tools 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 a decision-making framework that explicitly evaluates the level of risk if no action is taken and recognizes the monetary and non-monetary costs and benefits of reducing risks when making decisions. Risk analysis also deals with uncertainties in models, parameters, and assumptions and acknowledges them in decision making. Risk analysis comprises three tasks: risk assessment, risk management, and risk communication. Many risk assessment 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.

Risk analysis is an integral component of Corps of Engineers decision making in all business lines. It affects all technical analysis throughout each step of 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 aspects of risk analysis. In addition, risk concepts and risk informed decision making are being extended to aid decisions in all phases of project life. Major aspects of risk analysis included in this course are (a) definitions and concepts, (b) probability and statistics; (c) models for risk analysis; (d) non-quantitative methods; (e) event trees and decision trees; (f) Monte carol simulation; (g) using scenarios; (h) benefit-cost uncertainty; (i) risk informed planning; and (j) case studies from various applications to civil works. The course includes extensive use of computer exercises as aids to learning including hands-on risk modeling and assessment tools.

Description.

After completing this course the student should be able to: 1. Discuss the major causes of uncertainty in the Corps' Civil Works Program; 2. List the elements of integrated risk management; 3. Describe the differences between uncertainty and variability; 4. Use scenarios to deal with uncertainties; 5. Apply one or more qualitative risk assessment techniques; 6. List the Corps' software tools that support risk-informed planning; 7. Build a simple probabilistic scenario analysis in a spreadsheet environment; 8. Apply the addition, multiplication, and complimentarily rules for probability in simple problems; 9. Use the binomial distribution for simple probability calculations; 10. List the most useful distributions used in quantitative risk assessment; 11. Develop a distribution given some data; 12. Describe the two steps of the Monte Carlo process; 13. Run a simulation that uses the Monte Carlo process; 14. Conduct basic sensitivity and importance analysis; 15. Understand the issues of communicating technical and non-technical risk information to decision makers and stakeholders.

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.

RP MASTER PLNG VISUALIZATION TECHNIQUES

948 Length: 32 Hours 46RPV01A
LUs: 31 CMs: 31
Tuition: $2030

Purpose.

To provide master planners training in planning visualization techniques. The course objectives will be implemented through the use of Google Sketch-up, Adobe Photoshop, and Google Earth as tools to assist in military installation planning. The training applies to the planning and development of local cities and towns as well. With the udpate to AR 210-20, visualization skills are essential in building great area development plans.

Description.

The challenge of the installation planning requires planners to understand the broad context of community planning, the concept of scale, massing of facilities, landscaping, Architectural compatibility, and Force Protection/Critical Infrastructure Assurance aspects. Further, with the emphasis of neighborhood planning in LEED ND sustainability principles, it is essential to visualize the entire urban space that is being created. This 32-hour course provides Planners a fundamental overview of the use of planning visualization tools Google Sketch-up and Google Earth as "easy to use" tools to help plan our military installations. Students will have hands-on instruction on the use of the software and even produce several basic Area Development proposals using both Google Sketch-up and Google Earth. Further, students will leave with a knowledge in the fundamentals of Google Sketch-up, Adobe Photoshop, and Google Earth as tools in the planning and development of communities.

Prerequisites.

There are no prerequisite requirements to participate in this course. This course is open to the general public.

Notes.

This class is accredited by the American Institute of Certified Planners. Students are awarded 26 certification maintenance credits upon completion.

SAFETY MANAGEMENT FOR SUPV AND LDRS

236 Length: 24 Hours 55COS01A

Tuition: $1450

Purpose.

This course is designed for Corps of Engineers team leaders, 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 administrative safety requirements, safety management techniques, hazard assessment and accident reporting guidelines as well as a review of state-of-the-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, guiding them in their responsibilities for leading and managing safety.

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 project managers, area, resident, and project engineers, operations managers and/or supervisors and work team leaders in discharging 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;(m) industrial hygiene programs; and (n) USACE accident reporting responsibilities.

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.

NOTE: Formerly titled "Field Safety".

SCHEDULING BASICS FOR PROJECTS

143 Length: 24 Hours 46SBP01A

CEUs: 1.8 PDHs: 18 PDUs: 18

Tuition: $1000

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 project managers, and it is so oriented in its examples. 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 using typical P2 screens and information.

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 schedule development and basic diagramming techniques; analysis of diagram for starting and finishing times; utilization of a network diagram for project control, determination of progress; effects of project delays; and changes in scope.

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 or P2 is not required. This course is intended to meet the project scheduling requirement for Corps of Engineers PM certification at all levels (formerly covered by the Project Scheduling (NAS) course). This course is highly desirable for Project Managers and local configuration managers (LCM). Others that will benefit are Corps division and district engineers; division, branch, and section heads of project management, construction, operations, and engineering divisions; area engineers; resident engineers; office engineers; other quality assurance representatives; project and/or technical managers; and trial attorneys.

SECURITY ENGINEERING

958 Length: 36 Hours 55SEN01A

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.

Notes.

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 email at katherine.d.barnett@usace.army.mil, or by phone at 402-995-2393.

SEDIMENT TRANS ANALYSIS WITH HEC-RAS

122 Length: 36 Hours 35SDT01A

Tuition: $3040

Purpose.

This course reviews the principles of open channel hydraulics and provides information on channel aggradations 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-RAS. Topics include sediment characteristics and data gathering, sediment transport theories and equations, stream bed armoring, use and calibration of HEC-RAS 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-RAS 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. Students should have at least one (1) college level class in open channel hydraulics. A college level class in Sediment Transport is desirable.

SEEPAGE AND PIPING

250 Length: 36 Hours 35SEP01A

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 novice 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.

SEISMIC DESIGN BUILDINGS

27 Length: 36 Hours 35SDB01A

Tuition: $2760

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 2006 IBC and the 2005 ASCE 7 are expected to be the basis for the Corps seismic structural design by 2008. The Corps seismic manuals have been rewritten to reflect these criteria. Unless our designers are familiar with the new criteria, they could be designing buildings that do not meet the new codes and standards. The Corps designs Army buildings that must meet the latest codes. The most recent version of UFC 3-310-04, "Seismic Design for Buildings", is the current design guidance and is based on the 2005 ASCE 7.

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. Students will be able to design/review seismic design analyses and drawings more efficiently upon completing this course. The manuals to be used are UFC 3-310-4, "Seismic Design for Buildings", and UFC 3-330-03A, "Seismic Review Procedures for Existing Military Buildings,", and 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 or equivalent. Course is open to Air Force and Navy personnel.

SEISMIC STABILITY OF EARTH DAMS

247 Length: 36 Hours 35SSE01A

Tuition: $2700

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 1350; and (b) Grade GS-09 and above.

SHEAR STRENGTH

248 Length: 24 Hours 35SHS01A

Tuition: $2540

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 complements 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 Length: 36 Hours 35SSA01A

Tuition: $2470

Purpose.

This course covers current information and analysis procedures contained in the Corps' manual EM 11102-1902. The lecture covers basic principles and methods of slope stability analysis including shear strength and procedures for rapid drawdown. The lecture is intended for design engineers, technical specialists and independent technical reviewers involved in all aspects of slope stability.

Description.

The course will cover the following topics: (a) review of soil shear strength; (b) slope stability theories and analysis procedures; (c) design conditions and design criteria; (d) computational methods, including slope stability charts and computer programs; and special analysis procedures for sudden drawdown. Both hand and computer calculations will be used to illustrate the various analysis procedures for selected problems.

Prerequisites.

Civil engineers, GS-7 and above. Nominees should have a pre-knowledge of shear strength of soils.

SOIL STRUC INTERACTION

113 Length: 36 Hours 35SSI01A

Tuition: $3100

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 or equivalent. Nominees should be engineers involved in the design of structures and should have some experience in the use of personal computers.

SPECS FOR CONSTRUCTION CONTRACTS

185 Length: 36 Hours 35SWC01A
LUs: 34

Tuition: $1420

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.

SQL FOR IFS

975 Length: 32 Hours 54SDI01A

Tuition: $1600

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 Oracle data dictionary can assist in developing queries, and will reinforce the students understanding of using basic SQL commands to query the database moving to more advanced commands to create legible reports and create complex 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 the IFS database structure and modules.

Prerequisites.

All DPW personnel requiring training to use SQL to query the IFS database. This is a course for DPW Installation Personnel. THIS COURSE IS AN ONSITE CLASS ONLY.

STATISTICAL METHODS IN HYDROLOGY

58 Length: 36 Hours 35SMH01A

Tuition: $1460

Purpose.

This course is designed for participants to become knowledgeable in the application of statistical methods 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 must have had a college-level statistics course to fully succeed.

STEADY FLOW WITH HEC-RAS

114 Length: 36 Hours 35BH201A

Tuition: $1720

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 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 cross section layout, application of bridge and culvert routines, using the channel improvement option, floodway determination and model calibration. 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. Students should have had at least one (1) college level class in open channel Hydraulics. 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 EROSION & PROTECTION

285 Length: 36 Hours 35SBP01A
CEUs: 3.3
Tuition: $1690

Purpose.

PURPOSE: This course provides project managers, planners, technicians, engineers, biologists, designers, regulators, and personnel involved in Section 14, 1135, and 206 projects, with the latest practical knowledge and design criteria for streambank protection and associated erosion control methods.

Description.

DESCRIPTION: Participants review river mechanics and geomorphology and problems caused by streambank erosion. Through a series of lectures, field exercises, student team-developed streambank protection conceptual designs, and review and discussion of these designs, the student will be introduced to the following subjects: (a) fundamentals of fluvial geomorphology and river mechanics (hydraulic and geotechnical processes of streambank erosion and failure and causes of streambank erosion and failure); (b) streambed degradation protection measures (grade control structures and considerations in grade control structure design); (c) geotechnical considerations and design; (d) environmental considerations when designing protection works; (e) overview and design criteria of streambank protection measures, including: riprap blankets, trench fill and windrow revetments, dikes, retards, proprietary methods, lunkers, longitudinal peaked stone toe, bendway weirs, encapsulated earth, and many biotechnical methods; (f) techniques to analyze and select appropriate protection methods (or combinations of methods); (g) erosion control in high velocity channels; (h) construction, monitoring, maintenance, and repair of streambank protection projects; (i) how to conduct reconnaissance of a streambank erosion problem (pre-trip planning , gage data and aerial photography analysis, equipment needs, safety aspects, information gathering and measurement techniques); and (j) engineering experience (analysis of successful and unsuccessful projects, review of student-defined upcoming or ongoing projects, and open forums for discussion and questions).

LEARNING OBJECTIVES: At the conclusion of this course the student will be able to organize, prepare for, and conduct a field analysis of a streambank erosion problem, consider and analyze several alternative bank protection treatments, pick the most effective treatment, (or combination of treatments) taking into consideration the expected engineering performance, environmental ramifications, and cost effectiveness of the project, and develop a long-term monitoring, maintenance, and repair plan for the project.

Prerequisites.

PREREQUISITES: Federal nominees must be assigned (a) Occupational Series: Selected 0000-0100, 0400, 0800, 1300, and (b) Grade GS-05 or above.

SPECIAL INSTRUCTIONS: An important part of the class is a half-day field trip to investigate a local stream. Students will be required to climb streambanks and wade approximately one mile of stream over a period of 3 to 4 hours. ERDC-WES will provide needed field equipment. Students should bring appropriate field clothes, a windbreaker, and rain gear.

SURVEY I: BASIC PRINCIPLES

295 Length: 36 Hours 35SV101A
CEUs: 3.0 PDHs: 30
Tuition: $1860

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.

SURVEY II: CONSTRUCTION

339 Length: 28 Hours 35SV201A
CEUs: 2.1 PDHs: 21
Tuition: $2820

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.

SURVEY III: MAPPING

296 Length: 36 Hours 35SV301A
CEUs: 2.9 PDHs: 29
Tuition: $2585

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 ground-based laser mapping, and photogrammetric mapping collection techniques (from field to finish). The course provides demonstrations of equipment and software used to collect and process topographic 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.

o TOPOGRAPHIC MAPPING (FIELD SURVEY DATA COLLECTION TECHNIQUES)
- Electronic total stations, GPS, and other data collection tools.
- Field survey procedures for developing topographic data.
- Estimating costs and preparing specifications for field surveys.

o PROCESSING FIELD SURVEY DATA
- Transferring and processing field observations.
- 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. Therefore, nominees must have a general knowledge of PC operation.

SURVEY IV : GPS

203 Length: 36 Hours 35GPS01A
CEUs: 2.9 PDHs: 29
Tuition: $2240

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 CONCEPTS
- o GPS PLANNING
- o GPS DATA ACQUISITION
- o GPS DATA PROCESSING AND ADJUSTMENTS
- o GPS CONTRACTING
- 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.

SUSTAINABILITY AND LEED

244 Length: 36 Hours 41SAL01A

Tuition: $1700

Purpose.

This course provides practical, hands-on training in this rapidly emerging and dynamic body of requirements that applies to all military construction. Trainees will gain understanding of these requirements and become familiar with the Leadership in Engineering and Environmental Design - New Construction (LEED-NC) project rating tool. This course will help develop a skill set of procedures trainees can employ to successfully implement sustainable design and LEED in projects from master planning and initial project planning through construction closeout and beyond.

Description.

This course covers the following topics:

Federal mandates and Army, Air Force and USACE Sustainable Design and Development (SDD) criteria.

Low Impact Development (LID).

In-depth training on the LEED rating tool.

Incorporating SDD in planning charettes, project programming documents, contract documents and construction activities.

Life-cycle cost analysis (LCCA), energy analysis and strategies, sustainable technologies, waste diversion and master planning.

Prerequisites.

Attendees should be assigned as USACE master planners, engineers, cost engineers, military project managers, or construction administration staff. It is also applicable to Army and Air Force Installation master planners, environmental managers, energy managers, transportation managers and engineering staff. Nominees should have basic familiarity with USACE military design and construction process.

TRIAL ATTORNEY

179 Length: 36 Hours 37TLA01A

Tuition: $1890

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 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 pre-hearing procedures, 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 USING HEC-RAS

188 Length: 36 Hours 35UFA01A

CEUs: 3.2

Tuition: $1800

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. Additional topics include: modeling bridges and culverts, inline and lateral hydraulic structures, storage areas, model calibration, model stability and accuracy, trouble shooting, and advanced features for Unsteady Flow Modeling. 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-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. Students should have at least one (1) college level class in open channel hydraulics.

USACE 30 HR CONSTRUCTION SAFETY

215 Length: 36 Hours 58COS01A

Tuition: $1070

Purpose.

This course is designed to provide the USACE equivalent of the OSHA 30-hour Construction Safety Certification 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. Upon successful completion, students will receive a USACE 30-hour construction safety certification.

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.

NOTE: Formerly titled "Construction Safety".

USACE 30-HR OPERATIONAL AND MAINTENANCE SAFETY

63 Length: 36 Hours 58INS01A

Tuition: $1130

Purpose.

This course is designed for field personnel who have USACE facility operation or maintenance safety and health responsibilities. The course provides information relative to the Corps Safety and Health Requirements Manual, EM 385-1-1 and pertinent Occupational Safety and Health Administration (OSHA) general industry standards.

Description.

The course will cover through lectures, discussions, practical exercises and case studies, the major aspects of the Corps of Engineers operations and maintenance safety and health program folliwng the OSHA 30-hour general industry safety certification course template. Instruction and 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) control of hazardous energy/arc flash prevention; (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 O&M work team leaders, construction representative and/or quality assurance representatives, or other personnel with safety responsibilities, e.g., safety committee members, supervisors, project managers.

NOTE: Formerly titled "OSHA Inspection".

USACE GENERAL OFFICER/SENIOR EXECUTIVE SERVICE

415 Length: 20 Hours 15GOS01A

Purpose.

This course provides an orientation for newly assigned USACE Division Commanders and SES members and is taught by encumbent Division Commanders and USACE Senior Leaders.

Description.

Through interactive lectures and panel discussions, briefers will address the principles of Governance within USACE and at the DA level, critical organizational business processes, and key congressional and customer relationships.

Prerequisites.

Designated and recently assigned USACE General Officers (Division Commanders) and Senior Executive Service members. Participants are nominated by the USACE Director, Human Resources.

VALUE ENGINEERING

110 Length: 40 Hours 35VEW01A
CEUs: 3.2 PDHs: 32 LUs: 32
Tuition: $1825

Purpose.

This course provides the participant with the requirements, policies, and procedures necessary to enable the student to perform effectively as a value management/engineering study team member or leader; to recognize potential areas for VM/VE studies; to identify the value of utilizing Value Management/Value Engineering; and learn how to use VM/VE to Corps advantage, regardless of profession.

Description.

Through lectures, conferences, and workshop sessions, this course provides the history of value management/value engineering, its development in the Corps of Engineers, the need for value management/value engineering in Corps, the methodology employed, the VM/VE program, and program contractor participation. 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/other items selected by the offices involved. This course is designed primarily for training project managers, and construction/design engineers/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 or equivalent NSPS; (c) 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.

VISITOR ASSIST MGT & POL

324 Length: 20 Hours 35VAU01A
CEUs: 1.8
Tuition: $ 860

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 or Management & Policy 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/NRM Specialist, GS-9 or NSPS equivalent, 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.

VISITOR ASSIST NRM

147 Length: 36 Hours 35VAN01A
CEUs: 3.2
Tuition: $1560

Purpose.

This course, in combination with other required training, satisfies the minimum requirements for Authorization of Citation Authority and 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 (ER/EP 1130-2-550. Chapter 6). Course provides basic Pepper Spray training to elgible employees. Citation authority will only be granted to qualifying individuals as stipulated in the prerequisites paragraph.

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, Pepper Spray training, and personal protection techniques.

Prerequisites.

Nominees must be assigned (a) Occupational Series: GS-0023, 0025, or special GS-400 series such as biologist, forester, etc. or equivalent NSPS job series; (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, biologist, or natural resources specialist. 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. Individuals receiving citation authority to enforce CFR Title 36 must be employed under the USACE Natural Resources Management Program and must have principle duties in recreation and natural resource management. The individual must need citation authority to perform official duties in the most efficient manner and must be certified by the District Commander as per ER 1130-2-550, Chapter 6. Individual must have the proper aptitude, temperament, personality, experience, and ability to exercise citation authority properly as determined by management. Employees who have previously received this training shall be nominated for the Visitor Assistance Management and Policy course (No. 324).

WATER AND THE WATERSHED

164 Length: 36 Hours 33WAW01A
CEUs: 2.7
Tuition: $1940

Purpose.

This course provides participants with an understanding of the physical nature and role of water in the watershed, the history of Corps watershed policy and regulation, and the conceptual, technical, and institutional tools available for watershed planning and management.

Description.

This course aims to impart an understanding of the science, institutional policies, and available tools for watershed management and planning. 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 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 elements of watershed management. Historical and current regulations and policies affecting the Corps' approach to watershed planning and management are covered. Conceptual tools 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. The course will discuss the many active local organizations and Federal agencies 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 or environmental engineers, biologists, economists, sociologists, ecologists, planners, or study managers.

WATER QUALITY MANAGEMENT

177 Length: 36 Hours 33WQM01A

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.

WATER QUALITY MODELING WITH HEC-RAS

139 Length: 36 Hours 33WQH01A

Tuition: $1930

Purpose.

Provide students with a comprehensive overview of techniques of approximating the movement of pollutants in rivers and streams using HEC-RAS.

Description.

This course is intended to prepare engineers to perform water temperature and water quality studies with HEC-RAS. Topics to be discussed include: surface runoff; hydrologic transport; conservative tracers with steady and unsteady flow hydraulic computations; water temperature modeling and the effects of riparian shading; dissolved oxygen and biochemical oxygen demand; and nutrient cycle modeling.

Prerequisites.

USACE engineers that will be performing or reviewing water temperature and/or water quality studies. 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. In addition, course participants must be in positions or anticipate being in positions where they will be involved in water quality studies within the next year or two. Students should have at least one (1) college level class in open channel hydraulics and environmental modeling.

WELDING DESIGN

162 Length: 36 Hours 35WLD01A

Tuition: $1750

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 or equivalent; (c) have current or projected assignments requiring welding design and inspection responsibilities.

WELDING--QUALITY VERIFICATION

116 Length: 36 Hours 35WLQ01A
CEUs: 2.9 PDHs: 29
Tuition: $1720

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; or equivalent (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.

WETLAND MITIGATION BANKING

239 Length: 36 Hours 33WMB01A

Tuition: $1770

Purpose.

Demonstrating that the type of compensatory mitigation required for offseting adverse environemntal impacts due to 404 permits is of great significance to the program and the public. 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. Other types of on- and offsite mitigation, including in-lieu fee agreements, also must comply with existing and future guidance and regulations.

Description.

This course is offered cooperatively between the USACE Engineer Research & Development Center and the Institute for Water Resources to bring together their expertise in mitigation banking, on- and offsite mitigation and in-lieu fee agreement issues. Based on the technical experience from ERDC 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, in-lieu fee agreements and on and offsite mitigation. The course will address such subjects as setting mitigation 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.

WETLAND PLANT IDENT (SE)

423 Length: 32 Hours 33WPI01A

Tuition: $2990

Purpose.

Practical development of plant identification techniques, focusing on wetland threatened and endangered species of the Southeastern United States.

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 through GS-15.

WETLAND RIVER FUNC/ECOL

426 Length: 32 Hours 33WRF01A

Tuition: $2440

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) Lessons 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.

WETLAND RIVERINE FUNCTIONS ADVANCED

242 Length: 32 Hours 33WRE01A

Tuition: $2410

Purpose.

Corps employees are involved in a wide range of water resource management activities to include: evaluating, regulating, planning, designing, monitoring, adaptively managing and operating projects and their associated systems. A solid understanding of riverine function and processes is critical to successfully understanding, evaluating and effectively managing these systems in a sustainable context. This course is designed to provide students with an advanced applied knowledge of riverine processes and function. Further, it will feature field applications of the Hydrogeomorphic (HGM) functional assessment method for evaluating system function of existing stream and river restoration efforts. Working with noted experts, training is designed for a 50/50 mix of facilitated problem solving between classroom and field-based instruction. It will build upon knowledge gained in the Introductory Level Course (#426). Field-based training will include: evaluation, critique and re-design of existing stream and river restoration projects. One project is located in a smaller, upland drainage, and the other is located in a larger, downstream system.

Key advanced concepts presented will include:

- what actions could be considered/undertaken to restore impacted processes and function;
- Improved understanding of effective application of river restoration techniques; and
- how to evaluate the ecological function of healthy and degraded systems and the anticipated ecological function of restoration proposals for riverine systems.

Description.

Topics include: (1) New wetland river ecology concepts and understanding (2) Advanced riverine processes and function (3) Cutting-edge applied research and evaluation methodologies (4) Field application of the HGM classification system, (5) Field evaluation of existing riverine restoration projects (6) Conceptual Redesign of existing riverine restoration projects and (7) Lessons learned

Prerequisites.

Nominees must have completed the introductory level course (#426) to enroll. Students 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 course is designed to provide advanced instruction in riverine processes, function and restoration.

WETLAND STREAM ECOLOGY

192 Length: 32 Hours 33FSE01A

Tuition: $2430

Purpose.

A knowledge of the state-of-the-science wetland stream ecology is required to formulate science based Water Resources Development Act (WRDA) projects which are critical to the mission of the CE Civil Works Program. Additionally, NEPA (National Environmental Policy Act) and Clean Water Act (Section 404) driven wetland mitigation alternatives require an understanding of modern basic stream ecology which is holistic, landscape focused based on a systems approach to the biological, chemical, physical and geological components. Students will collect and identify wetland stream flora (botanical/plant) including the dominant vascular flowering plants and algae associated with streams. Laboratory and field work will be directed at identifying the benthic (bottom dwelling) stream macro and microinvertebrates important to stream water quality, nutrient cycling and food web linkages. A revolutionary new focus will be to develop a knowledge of stream geofluvial processes important to shaping and reshaping the active modern river channel and its associated floodplain in a geological time frame. Participants will meet on a one-on-one basic leading international and national experts in the field of stream ecology. Problem solving field exercises in real time and place will be conducted and facilitated by these experts and class facilitators to develop an understanding of altered stream ecology and its impacts on selected ESA species inhabitating western river systems.

Description.

Topics include: (1) A holistic and landscape driven approach to wetland stream ecology, (2) Introduction to the identification of flora and fauna of wetland stream systems with a strong focus on western regional stream systems, (3) Introduction to the processes and effects of geofluvial morphology on stream systems, (4) Focus on stream water quality factors including nutrients, sediments and catchment areas, (5) Application of the new stream ecology knowledge to understanding and developing ESA (Endangered Species Act) mitigation alternatives ie Bull Trout, etc.

Prerequisites.

Noninees may be assigned from engineering, construction, regulatory, planning, natural resources, program and project management business lines and pacticies within the Corps of Engineers and other Federal Agencies. Occupational Series: Open to all including navigation, flood control and the environment. Students should have already have taken Course Number 426 titled Wetland River Func/Ecol which is a basic overview course.

WETLANDS DEV & REST

276 Length: 32 Hours 33WDR01A

Tuition: $1800

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.

WETLANDS EVALUATION PROCEDURES

273 Length: 36 Hours
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.

WORKING DIVER

35 Length: 160 Hours 58DVS01A

Tuition: $12070

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.

SECTION 3 - COMPETITIVE PROFESSIONAL DEVELOPMENT

Introduction

A variety of Competitive Professional Development opportunities are provided by DOD, HQDA, HQUSACE, and local activities. Many of these programs are announced annually in The Army Civilian Training Education and Development System (ACTEDS) Catalog. . This catalog is available on the Army Civilian Personnel Online at http://cpol.army.mil/library/train/catalog/.

Typically the programs listed in the ACTEDS Catalog are competitive and many are at least partially funded. The catalog includes information on the Civilian Education System, Senior Service College Programs, Functional Chief Representative Competitive Professional Development and Short Term Training Programs, Government and Non-Government Programs and Career Field Training.

Eligibility requirements, application procedures and forms and Army level suspense dates are included in the catalog. Please note however that many of these programs require that applications flow up the chain of command for prioritization and/or endorsement of the Army Command (ACOM). These programs will have interim suspense dates for submission of application.

USACE announces interim suspense dates and any USACE specific requirements by OPORD that are issued to subordinate commands. If you have questions regarding internal suspense dates please contact your CPAC or Major Subordinate Command (MSC) Human Resources Specialist.

SECTION 4 - (FOR CORPS OF ENGINEERS ONLY) ARMY SERVICE SCHOOLS AND DEFENSE MANAGEMENT EDUCATION AND TRAINING (DMET)

General

The courses in this section are listed by school codes. Obtain course descriptions, prerequisites and length from your local Training Officer.

Source

The 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

- ✓ The USACE Learning Center (CEHR-ULC) receives the DOD quotas through the Structure Manning Decision Review (SMDR) process which is accomplished 3 years prior to the Fiscal Year the courses occur.
- ✓ The quotas received are published to all training POCs, and issued on a first-come, first -serve basis upon receipt of a SF 182 (Authorization, Agreement, Certification of Training).
- ✓ The employee's supervisor must submit a SF 182 for all primary and space-available nominations to the Training Officer. The Training Officer will process all requirements and fax them to (256) 895-7469, DSN 760-7469 or forward them to CEHR-ULC-PMO at the following address:

  Director
  USACE Learning Center
  ATTN: CEHR-ULC-PMO (Registrar)
  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. Organizations sponsoring on-site classes will be charged a fee.

Student Notification

See the following chart.

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.
Auditor School	Each student receives a letter prior to course start date.
Inspector General Auditor Training Institute	Each student receives a letter prior to course start date.
Judge Advocate General School	Forwards reporting instructions to students prior to course start date.
DMET Schools	Resident Courses. Students receive reporting instructions from the school before course start date. On-site Courses. Students receive reporting instructions from the hosting activity before course start date.

Schedules

You may obtain schedules that include dates and locations by accessing the school websites or accessing the ATRRS website at www.atrrs.army.mil.

MAJOR ARMY SERVICE SCHOOL SPONSORS
SHORT LIST of SCHOOLS and COURSES

Army Safety Center, Ft. Rucker, Alabama.....(https://crc.army.mil) ..... (SC 012)

2G-F94 (DL)	Commander's Safety

Inspector General Auditor Training, Ft. Belvoir, Virginia ..... (SC 015)

DAIG	Inspector General
DAIG	IG Refresher Course

CECOM, Ft. Monmouth, New Jersey.....(www.wood.army.mil) ..... (SC 023)

7E-F66/531-F21(CT)	Systems Administrator Security Course
7E-F104/531-F57 (CT)	Security +
7E-F105/531-F58 (CT)	Network Manager Security

Chemical School, Ft. Leonard Wood, Missouri ..... (SC 031)

A-494-0006	Disaster Preparedness Office/Specialist

Academy of Health Sciences, Ft. Sam Houston, Texas ..... (SC 081)

Ordnance Munitions/Electronics Maintenance School, Redstone Arsenal, Alabama ..... (SC 093)

Army Quartermaster School, Ft. Lee, Virginia ..... (SC 101)

Army Signal School, Ft. Gordon, Georgia.....(www.gordon.army.mil) ..... (SC 113)

4C-F22/160-F23	Standardized COMSEC Custodian
4C-F59/160-F39	Local COMSEC Mgt SW (LCMS) Wkst Operator
531-F31 (CT)	Advanced Tactical Network Training
7E-F104/531-F57 (CT)	Security +
7E-F105/531-F58 (CT)	Network Manager Security
7E-53A	Information Systems Management

Army Staff Training Center, Ft. Monroe, Virginia ..... SC 131)

5K-F15/012-F40	Systems Approach to Training Basic
5K-F28/570-F15 (DL)	Instructional Design for Performance
5K-F29/570-F16 (DL)	Training Analysis
5K-F30/570-F17 (DL)	Training Administration

Judge Advocate General School, Charlottesville, Virginia .....(www.jagcnet.army.mil/tjagsa)(SC 181)

5F-F10	Contract Attorneys Course
5F-F101	Procurement Fraud Course
5F-F102	Contract Litigation Course
5F-F103	Advanced Contract Law
5F-F11	Government Contract Law Symposium
5F-F12	Fiscal Law
5F-F13	Operational Contracting Course
5F-F14	Comptroller Accreditation Fiscal Law
5F-F202	The Ethics Counselors Course
5F-F21	Advanced Law of Federal Employment Course
5F-F22	Law of Federal Employment Course
5F-F24	Admin Law for Installations Course
5F-F29	Federal Litigation Course
5F-F34	Criminal Law Advocacy Course
5F-F35	Criminal Law New Developments Course
5F-F41	Intelligence Law Course
5F-F42	Law of War Course

LIST of SCHOOLS and COURSES (Continued)

5F-F43	Advanced Intelligence Law Course
5F-F45	Domestic Operational Law Course
5F-F47	Operational Law Course
5F-JAG	JAG Annual CLE Workshop
7A-270A1	Legal Administrators Course
8F-DL12	Distance Learning Fiscal Law Course

USA Claims Services, Ft. Meade, Maryland ..... (SC 182)

USARCS-1	Claims Training Course

Army Military Police School, Ft. Leonard Wood, Missouri.....(www.wood.army.mil) ..... (SC 191)

7H-ASI9D/832-F20	Advanced Fraud Investigation
7H-F19/830-F14	Crisis/Hostage Negotiation
7H-31D/830-ASIH3	Conventional Physical Security/Crime Prevention
9E-F3/950-F2 (DL)	Incident Response Handler
9E-F4/950-F3	Antiterriorism Officer (Advanced)
9E-F5/950-F4	Antiterrorism Officer (Basic)
9E-F6/950-F5	Criminal Antiterrorism/Police Intel Mgt

Defense Information School, Ft. Meade, Maryland.....(www.dinfos.osd.mil) ..... (SC 212)

DINFOS-EC	The Editor Course
DINFOS-PAQC	Public Affairs Qualification Course
DINFOS-PAQC-ADL-NR (1)	PA Officer Qualification Course-ADL-NR
DINFOS-PAOQC-ADL-R (2)	PA Officer Qualification Course-ADL-R

Intelligence School, Ft. Huachuca, Arizona.....(https://icon.army.mil) ..... (SC 301)

3C-F14/244-F8	Intelligence in Combating Terrorism

Army Transportation School, Ft. Eustis, Virginia.....(www.eustis.army.mil) ..... (SC 551)

8C-F11/542-F6	Passenger Travel Specialist
8C-F12/553-F1	Basic Freight Traffic
8C-F3	Defense Advanced Traffic Management
8C-F4/553-F10	Installation Traffic Management
8C-F9/811-F1	Military Stnd Trans & Movement Procedures
8C-S13V/553-F13	Joint Personal Property

Army Command and General Staff College, Ft. Leavenworth, Kansas ..... (SC 701)

1-250-C11	Advanced Military Studies
2G-F99 (CT)	Personal Awareness Leadership Sem

Air Staff College, Maxwell AFB, Alabama ..... (SC 709)

USAF Institute of Technology, Wright-Patterson AFB, Ohio ..... (SC 771)

Defense Geospatial Intelligance School, Ft. Belvoir, Virginia ..... (SC 802)

4M/41-716	Fundamentals of GIS Course
4M/41-712	Intro to RSI/GIS

LIST of SCHOOLS and COURSES (Continued)

Army Finance School, Ft. Jackson, South Carolina…….(www.finance.army.mil) ..... (SC 805A)

7D-F29/541-F12	Advanced Management Accounting and Analysis
7D-F18/542-F8	Disbursing Operations
7D-45A/541-F13 (1)	Planning, Programming, Budgeting, and Exe Sys
7D-45A/541-F13 (DL)	Planning, Programming, Budgeting, and Exe Sys
7D-45A/541-F7 (DL)	Resource Management Budget
542-36B10	Financial Management Technician
921-723	Financial Manager Orientation Course

Army Info Sys Cmd School, Ft. Huachuca, AZ ..... (SC 829)

7E-F104/531-F57(CT)	..... Security +
7E-F105/531-F58(CT)	..... Network Manager Security

Army Logistics Management College (ALMC), Ft. Lee, Virginia.....(www.almc.army.mil) . (SC 907)

ALMC-AX (DL)	Army Logistics Introductory
ALMC-CL	Contracting Officer Representative
ALMC-DM	Defense Hazardous Waste (Refresher)
ALMC-HA	Def Hazardous Materials/Waste Handling
ALMC-IN	Installation Logistics Management
ALMC-MG	Manpower and Force Management
ALMC-QA	Army Acquisition Basic
ALMC-RB	Risk Analysis
ALMC-RD	Decision Analysis
ALMC-RS (DL)	Defense Regional Interservice Support
8A-F17	Theater Logistics Studies Program
8A-F3	Army Maintenance Management
8B-F10	Defense Distribution Management
8B-F11	Defense Inventory Management

Army Logistics Management College (ALMC) - Huntsville Campus, Huntsville, Alabama ... (SC 907A)

ALMC-QA	Army Acquisition Basic Course
ALMC-AIC	Army Acquisition Intermediate Contracting Course
ALMC-AIL	Army Acquisition Intermediate Logistics Course
ALMC-AS	Army Acquisition Special Topics Seminar
ALMC-CL	Contracting Officer's Representative Course
ALMC-DR	Performance Work Statements Course

The website address is: http://www.almc.army.mil/ALMC_huntsville.htm

Military Packaging Technology School, Aberdeen Proving Ground, Maryland ..... (SC 908)

8B-F2	Defense Packing and Unitization
8B-F3	Defense Advanced Preservation and Packing
8B-F35	Def (Ref) Pkg of Hazardous Materials for Trans
8B-F7	Def Pkg of Hazardous Materials for Trans
SMPT-2	Packaging and Packaging Management

Army Defense Ammunition Center, McAlester, Oklahoma.....(www.dac.army.mil/AS/) .... (SC 910)

AMMO-37	General Transportation of Hazardous Materials

Readiness Training Academy (RTA), Fort McCoy, Wisconsin ..... (SC 921)

921-630	Network Mgr Security Course

The website address is: (https://arrtc.mccoy.army.mil/rta)

National Guard Profession Education Center (NGPEC)
Camp Robinson, North Little Rock, Arkansas.....(www.pec.ngb.army.mil) ..... (SC 922)

ITTC-SCC	Standardized COMSEC Custodian Course
ITTC-073	Security +

MAJOR DMET SPONSORS

Defense Institute Security Assistance Management (DISAM)
Wright-Patterson AFB, Ohio

Defense Logistics Agency (DLA)
Civilian Personnel Service Support Office
Columbus, Ohio

Defense Resource Management Education Center
Monterey, California

Defense Security Institute (DSI)
Richmond, Virginia

Defense Systems Management College (DSMC)
Washington, DC

Information Resources Management College (IRMC)
Washington, DC

SECTION 5 – (FOR CORPS OF ENGINEERS ONLY)

ARMY CIVILIAN HUMAN RESOURCE TRAINING APPLICATION SYSTEM (CHRTAS) ON-LINE SYSTEM FOR CIVILIAN EDUCATION SYSTEM (CES) COURSES

The Civilian Education System (CES) is a new progressive and sequential leader development program that provides enhanced leader development and education opportunities for Army civilians throughout their careers. Army civilians will become multi-faceted civilian leaders of the 21st Century who personify the warrior ethos in all aspects, from war-fighting support to statesmanship, to business management.

General

STOP! As a Corps of Engineers Employee your first stop for information about CES are the USACE Standard Operating Procedure (SOP) and CES Matrix located at the HQ USACE-HR Intranet web site: https://hqintra1.hq.ds.usace.army.mil/cehr/index.asp

You can find additional useful information on CES at the Army Management and Staff College (AMSC) web site: http://www.amsc.belvoir.army.mil/ces/

Finally, you can use the CHRTAS on-line system for additional information about the CES courses and to register for a course: https://www.atrrs.army.mil/channels/chrtas

Source

Headquarter Department of Army G-3/5/7 Policy, dated 22 November 2006.

Cost

There is no tuition cost for the CES online or classroom-based courses. For Department of the Army Civilian employees attending CES classes, AMSC will process your TDY Request through the Defense Travel System (DTS). The TDY procedures are posted in Blackboard for those students attending the resident phase. AMSC does not fund rental cars, excess baggage fees, baggage handler tips, long-term airport parking, phone calls, Internet connect fees, and in/around transportation at TDY site. If the student's organization agrees to fund a rental car or additional expenses that AMSC does not fund, please ensure that you add your organization's Line of Accounting to your TDY Request Form located in Blackboard. Your travel voucher will be processed through DTS via AMSC.

ARMY CIVILIAN LEADER DEVELOPMENT PROGRAMS

Distributed Learning (dL)

1-250-C59 (DL) CES Foundation (57 Hrs DL)
1-250-C60 (DL) CES Basic (40 Hrs DL)
1-250-C61 (DL) CES Intermediate (44 Hrs DL)
1-250-C62 (DL) CES Advanced (63 Hrs DL)
1-250-C63 (DL) CES for Senior Leaders (40 Hrs DL)

Individuals applying for CES courses must apply for and complete the respective Distributed Learning (dL) course (Phase 1) before applying for the Resident Course (Phase 2).

Individuals must have completed the dL course in CHRTAS before they can apply for the respective resident course. The dL course completion is valid for 365 days. Individuals will be able to register for a resident class that is within 365 days from the dL completion date. When the dL completion date is greater then 365 days, the applicant will be required to retake the dL before they are able to apply for the resident course.

Individuals applying for a resident course will only be able to apply for classes with a start date of 60 days or greater from the application date. A new feature in CHRTAS, under student functions, allows those wishing to apply for a class within 60 days to submit a request for exception.

ResidentialClasses

Army Management Staff College, Fort Belvoir, VA (SC 704)
1-250-C61 CES Intermediate (3 weeks resident)
1-250-C62 CES Advanced (4 weeks resident)
1-250-C63 CES for Senior Leaders (4.5 days resident)

Army Management Staff College, Fort Leavenworth, KS (SC 701J)
1-250-C60 CES Basic 2 weeks resident)
1-250-C61 CES Intermediate (3 weeks resident)

AODC

Action Officer Development Course (AODC) is a web-based course that focuses on "staff work" practices in the Army and covers organization and management; conducting completed staff work; managing time and priorities; conducting meetings and interviews; solving problems and making decisions; communications; writing to the Army standard; coordinating; conducting briefings; and ethics. AODC is required for all Interns.

SDC

Supervisor Development Course (SDC) is a web-based course with topics that focus on managing, leading and human resources management. SDC is required for all Army civilians in a supervisory or managerial position. The SDC must be completed within one year of placement in a supervisory or managerial position to meet the one-year supervisory probationary period requirement.

MDC

Manager Development Course (MDC) is a web-based course with topics that focus on managing, leading and human resources management. MDC includes topics in organizational culture; time management; objectives and plans; problem solving and decision making; planning, programming and budgeting; manpower management; communications; information technology applications; the Army Environmental Program; equal employment opportunity; professional ethics; internal management control; and Army family team building.

DSLDP

DOD Defense Senior Leader Development Program (DSLDP) is the premiere executive development program for senior defense civilians and a key component of the DoD succession planning strategy. DSLDP provides joint leadership academic experience through: senior-level professional military education; Defense-unique leadership seminars from an enterprise-wide perspective; and opportunities for individual development based on the participant's Individual Development Plan. The goal of DSLDP is to empower participants to think strategically, and formulate proactive, competitive solutions that produce results for DoD and the nation. DSLDP program elements are designed to enhance an individual's readiness for top leadership positions. DSLDP participants are selected by an HQDA Secretariat Board and expected to complete the program within two years.

SSC

Senior Service College (SSC) is at the apex of the Army civilian education system and prepares Army civilians for positions of responsibility in the Department of Defense. SSC provides advanced level educational opportunities for leaders who require an understanding of complex policy and operational challenges and increased knowledge of the national security mission. Attendance is a competitive process and selections are made by an HQDA Secretariat Board. Army civilians graduating from SSC are centrally placed in a position of greater responsibility to an assignment or organization where they can apply the advanced education they have received.

CES Foundation Course (FC)

The Foundation Course is a web-based course approximately 57 hours in length. It provides an orientation to the Army, and develops civilians as effective members of the Army team. Students gain an understanding of the Army's role within the Department of Defense, as well as the Army's composition, customs, traditions, values, ethics and the basics of Army leadership doctrine. Students will also learn team development, conflict management, administrative requirements, and oral and written communication skills. The course builds self awareness, as it relates to their profession; understand team building, group dynamics, and effective communication; assess individual values and how they relate to professional ethics, complete administrative requirements expected of Army civilians, and provides career progression information.

Foundation Course End-state: An Army Civilian Corps member who understands the Army and operates as an effective Army team member.

For more information, visit
http://www.amsc.belvoir.army.mil/ces/

CES Basic Course (BC)

The **Basic Course** is required for Army civilians in team leader, supervisory or managerial positions and available to all other Army civilians. BC develops Army civilians skilled in leading; managing human and financial resources; implementing change; directing program management and system integration; displaying flexibility, resilience, and focus on mission. It is to educate the team leader on the basic foundations of leadership and management skills to facilitate mission accomplishment. This course is designed using a blended approach combining the use of distributed learning (dL) through the Internet, followed by two week classroom education.

The three major underpinnings of *Student Centered, Problem Based*, and *Experiential,* establish the basis of success in the Basic Course on how to comprehend basic leadership skills, apply effective leader and communication skills, demonstrate leadership awareness, and comprehend the value of self and team member development. These goals are supported using Army doctrine; educational and leadership theories; small group instruction; along with a combination of behaviorist, cognitivist (information processing), and constructivist knowledge theories.

• **Student Centered** – All curriculum is designed to ***focus*** on the transference of knowledge through incorporating the ***Army's*** Life Long Learning Philosophy with the emphasis on ***leader development***. This focus encourages students incorporating "self-responsibility" as a key element in both professional and personal leader development.

• **Problem Based** – The curriculum is designed to provide students with "real world" issues and problems that they will encounter as a direct leader. Through collaborative learning opportunities with other leaders, the student will develop or enhance additional skill sets to be a more effective leader.

• **Experiential** – Using an experiential education methodology through activities and reflection, students are allowed to "practice" the new skills in an environment that minimizes risk and encourages and offers immediate feedback.

Basic Course End-state: A Department of the Army Civilian who;

- **Comprehend Basic Leadership Skills**
- **Apply Effective Leader and Communication Skills**
- **Demonstrate Leadership Awareness**
- **Comprehend the value of Self & Team Member development**

For more information, visit
http://www.amsc.belvoir.army.mil/ces/

CES Intermediate Course (IC)

The **Intermediate Course** is required for Army civilians in supervisory or managerial positions and available to all other Army civilians. This target population is, by necessity, more agile, innovative, self-aware, and prepared to effectively lead and care for personnel and manage assigned resources. Training and development exercises focus on mission planning, team building, establishing command climate, and stewardship of resources. IC is conducted through blended learning – dL and three weeks resident training.

The three major underpinnings of *Student Centered, Problem Based*, and *Experiential,* establish the foundation of success in the Intermediate Course on ***how to develop a cohesive organization, while applying leadership skills to achieve results***. These underpinnings are supported using Army doctrine; educational and leadership theories; small group instruction; along with a

combination of behaviorist, cognitivist (information processing), and constructivist learning theories.

· **Student Centered** – All curriculum is designed to ***focus*** on the transference of knowledge through incorporating the ***Army's*** Life Long Learning Philosophy with the emphasis on ***leader development***. This focus encourages students to incorporate "self-responsibility" as a key element in both professional and personal leader development.

· **Problem Based** – The curriculum is designed to provide students with "real world" issues and problems that they will encounter as a direct or indirect leader. Through collaborative learning opportunities with other leaders, the student will develop or enhance additional skill sets to be a more effective leader.

· **Experiential** – Using an experiential education methodology through activities and reflection, students are allowed to "practice" the new skills in an environment that minimizes risk and encourages and offers immediate feedback.

Intermediate Course End-state: An Army Civilian Corps skilled in leading people; developing cohesive and efficient organizations; managing human and financial resources; implementing change; and demonstrating effective thinking and communication skills, with a focus on mission.

For more information, visit
http://www.amsc.belvoir.army.mil/ces/

CES Advanced Course (AC)

The **Advanced Course** is for civilian leaders who exercise predominately indirect supervision. It is required for Army civilians in supervisory or managerial positions and available to all other Army civilians. AC focuses on Army civilians skilled in leading a complex organization in support of national security and defense strategies; integrating Army and Joint systems in support of the Joint Force; inspiring vision and creativity; and implementing change; AC is conducted through blended learning, a combination of 63 hours distributed learning (dL) and four weeks classroom education.

The three major educational concepts of *Student Centered*, *Problem Based*, and *Experiential* establish the foundation of success in the Advanced Course on how to lead a complex organization in support of national strategies, and integrating Army and Joint systems in support of the Joint Force. These concepts are supported using Army doctrine; educational and leadership theories; small group instruction; along with a combination of case studies, written papers and oral presentations.

· **Student Centered** – All curricula is designed to **focus** on the transference of knowledge through incorporating Life Long Learning with the emphasis on leading a complex organization. This focus encourages students to incorporate "personal experience" as a key element in both professional and personal leadership at the strategic level.

· **Problem Based** – The curriculum is designed to provide students with "real world – strategic" issues and problems that they will encounter as an indirect leader. Through collaborative learning opportunities with other leaders, the student will develop or enhance additional skill sets to be a more effective leader and manager.

· **Experiential** – Using an experiential education methodology through activities and reflection, students are allowed to "integrate" their new skills with their existing skills and abilities developed over their civilian or military careers. This integration will occur in an environment of open discussion within the seminar room that enables feedback from peers and faculty.

Advanced Course End-state: Army Civilians skilled in leading a complex organization in support of national security and defense strategies; managing organizational resources; leading change; inspiring vision and creativity; directing program management and integrating Army and Joint systems in support of the Joint Force.

Continuing Education for Senior Leaders (CESL)

The Continuing Education for Senior Leaders (CESL) course is comprised of approximately 40 hours of pre-course material (reading and writing) and a 4.5 day classroom education. The CESL course is for GS14 and 15 or equivalent and active duty military with the rank of LTC, COL, CW4, CW5, SGM, or CSM who have completed either the CES Advanced Course, Sustaining Base Leadership and Management Course, Command and General Staff College (CGSC)/Intermediate Level Education (ILE), Warrant Officer Senior Staff Course (WOSSC), or the Sergeant Majors Course (SMC) a minimum of 3 years prior to the CESL class report date.

This program is designed to provide a continuing education and sustainment program for senior civilian Army leaders and select senior military leaders. CESL will provide senior level Army civilians who have not completed a Senior Service College an opportunity to refine their skills and potential for the Department of Defense's future contemporary operating environment. As a CESL student, you will discuss current and relevant issues facing the Army today. You will engage in interactive exercises and presentations on topics that will challenge you to examine your leadership ideologies in a professional, educational atmosphere and share with your peers the challenges that you face as an Army civilian leader.

Equivalency Course Credits:

Applicants are required to use the secure on-line request process to request CES Equivalency Credit available through CHRTAS. The revised process complies with personally identifiable information (PII) requirements and will reduce the applicant processing time. Information and process for requesting CES Equivalency Credit is located at the CES course credit link on CHRTAS at:
https://www.atrrs.army.mil/channels/chrtas

POC's for CES Courses:

- dL Help , registration, technical, and enrollments/graduation inquiries – dL Help Desk – dLTeam@conus.army.mil
- Basic Course – Carrie Criqui – carrie.criqui@us.army.mil
- Intermediate Course – Maria Rios - maria.maite.rios@us.army.mil and Barbara Coley – Barbara.coley@us.army.mil
- Advanced Course – Deborah Withers – Deborah.h.withers@us.army.mil and Levi Williford – levi.williford@us.army.mil
- CESL – Maria Rios - maria.maite.rios@us.army.mil <
- Marketing – Joyce Melton – joyce.melton@us.army.mil