PROJECT MANAGEMENT
Career Development and Training

PM Career Handbook

1996

U.S. Army
Corps of Engineers

Title Page

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
WASHINGTON, D.C. 20314-1000

REPLY TO
ATTENTION OF:

CECW-B

January 23, 1996

MEMORANDUM FOR Project Managers, Program Managers, and
Supervisors in Programs and Project Management

SUBJECT: Project Management Career Handbook and Course Directory

1. On behalf of the entire Programs and Project Management community in the U.S. Army Corps of Engineers, this office asked the Institute for Water Resources (IWR) to research the career development and training needs of our project managers and to develop guidance to help both aspiring and practicing project managers to obtain the career development and training that would contribute to a cadre of five-star project managers across the Corps. This Career Handbook and Course Directory are the result of that effort.

2. The Project Management (PM) Career Handbook contains the Career Ladder, Career Development Plan, and Master Training Plan, for the Programs and Project Management function recently approved by the Engineers and Scientists (Resources and Construction) Career Planning Board on December 18, 1995. These amendments to the ESRC ACTEDS plan will be formally distributed by the Board Chairman as soon as they are approved by the Department of the Army.

3. The new guidance reflected in the Career Development and Master Training plans was carefully crafted with the help of an advisory panel representing all Corps echelons and programs to which project management is being applied. And, it has benefited from review by the ESRC Career Program Managers, Human Resource Officers, and Directors and Deputy District Engineers of Programs and Project Management (PPM), throughout the entire Corps.

4. The Handbook also contains an informal Training Guide which describes and explains the levels and kinds of project management career development and training, and recommends how to achieve the basic goal of becoming a five-star project manager in the Corps. The Training Guide is designed to complement the PPM components of the ACTEDS plan. Both the Training Guide and the PPM ACTEDS plans refer to the PM Course Directory.

CECW-B
SUBJECT: Project Management Career Handbook and Course Directory

5. The PM Course Directory contains information on about 100 courses, both those explicitly mentioned in the ACTEDS plan and Training Guide, and others to select from to satisfy general requirements and recommendations for formal classroom training. The Course Directory is keyed to this guidance, and includes sections and subsections for each level and most kinds of formal classroom training. Instructions for its use are included in the PM Career Handbook.

6. We offer this guidance and these aides for planning and managing PM career development and training, and encourage all aspiring and practicing project managers and their supervisors to put them to use immediately. We welcome suggestions for improving the Handbook and the Directory. In the meantime, if you should have any questions about the policies, guidance, or any of the contents of these documents, please contact this office or IWR, as appropriate.

GARY A. LOEW
Acting Chief
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INTRODUCTION

This document will help Corps employees plan and manage their careers in project management. It contains a career Handbook and a course Directory. It is intended for both aspiring and practicing project managers.

CAREER HANDBOOK

The career Handbook will help employees plan and manage their career development and training with the assistance of their supervisors. It introduces the Army career management system and the Corps ACTEDS plan for engineers and scientists. The ACTEDS plan is appended for quick reference.

The Handbook describes the ACTEDS career ladder and plans for the programs and project management function, and shows how a career in PPM is related to other Corps careers. The Handbook also contains a basic guide for the development and training of project managers in the Corps.

COURSE DIRECTORY

The course Directory will help employees identify and select training to prepare them for project management and enhance their most needed PM skills. It is designed to be used with the Handbook's training guide, and contains information on about 100 training courses and programs.

The Directory focuses on project management training and complements The Purple Book and TRAIN (Training Resource Access Information Network). It will be updated annually and will include (in future editions) courses nominated and evaluated by Corps project managers.

GENERAL OUTLINE

This document is designed to be used in a three-ring notebook. It is divided into two parts and six major sections as follows:

CAREER HANDBOOK
- Introduction
- A. Career Management
- B. PM Training Guide
- C. Using the Directory
- Appendix: ACTEDS Plan

COURSE DIRECTORY
- Contents
- 1. Introduction Courses
- 2. Preparation Courses
- 3. Enhancement Courses
- Index

CONTACT POINTS

This document was prepared by IWR, the Institute for Water Resources, for the proponents of project management at USACE Headquarters. Questions and comments may be addressed to either of the following:

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ARMY POLICY

It is the responsibility of the individual employee to plan and manage his/her career in the Corps in close cooperation with his/her supervisor. Relevant policies and procedures are set forth in Army Regulation 690-950[1] and in DA Pamphlet 690-950[2], respectively. Their contents are outlined in Boxes 1 and 2 below.

Army Regulation 690-950

This Army regulation provides general information about merit promotion and career programs. It describes the structure of the programs, and explains the objectives of their management, including recruitment, central referral and career development through ACTEDS. It also lists responsibilities by position, including those of supervisor and employee.

DA Pamphlet 690-950

This companion pamphlet, in addition to procedural details, forms, and instructions, also contains defining information on the Intern Program and the career program involving PPM, the Engineers and Scientists (Resources and Construction) or ESRC program. Important ESRC definitions, requirements, and qualifications are specified in Chapter 6.

1. THE CONTENTS OF AR 690-950

CHAPTER
1.... Introduction
2.... Merit Placement and Outside Recruitment
3.... Career Intern Program
4.... DA Civilian Announcement Distribution System
5.... Army Acquisition Workforce/ Army Acquisition Corps
6.... Civilian Intelligence Personnel Mgmt System
7.... Career Program Unique Policies
APPENDIX
A.... References
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2. CONTENTS OF DA PAM 690-950

CHAPTER (irrelevant CPs omitted)
1.... Introduction
2.... Army Civilian Career Evaluation System (ACCES) Consolidated Career Program Package
3.... DA Civilian Announcement Distribution System
6.... Engineers and Scientists (Resources & Construction) (CP-18)
10... Career Intern Program
APPENDIX
A.... References
B.... Central Referral Ofices
C.... Instructions for 2302-R*
D.... Instructions for 4338-R
E.... Instructions for Conducting Screening Panels
F.... Instructions for 2302-2-R
G.... Instructions for 4343-R
H.... Management Control Evaluation Checklist
I.... Instructions for 5470-XX-R
GLOSSARY
FORMS

* This and other numbers refer to DA Forms

1. Army Regulation 690-950, Civilian Personnel, Career Management. Headquarters, Department of the Army, Washington, DC. Forthcoming.

2. Department of the Army Pamphlet 690-950, Career Program Registration and Administration, Career Management. Headquarters, Department of the Army, Washington, DC. Forthcoming.

ACTEDS PLAN

Further important guidance for ESRC career planning and management is provided in the ACTEDS plan for this program. It specifically addresses the development and training of employees for key positions in this career program, including the DDE(PPM) and the Project Manager. A copy of the ACTEDS plan is appended.

Unique guidance provided in the ACTEDS plan (not in the AR or DA PAM) includes career ladders, development plans, and master training plans for the functions of the program. The ladder and plans for the PPM function are introduced below.

PPM Career Ladder

Career ladders show the typical progression to key positions in a career field, including the paths for movement between the functions of the program. The ladder for PPM and the other project related functions is displayed in Table A-1 on page A-4. A single career ladder is used for planning, engineering, construction, operations, and programs and project management. Hints on how to read and use the career ladder are provided in Box 3.

The district segments of the ladder are generalized paths with full sets of positions. Such conditions do not exist everywhere. In some districts, rungs of the PPM ladder are missing, the GS-14 positions in particular. The PPM career path is connected however by job opportunities in technical functions and in other districts.[3]

The careers of most PMs will begin as staff in one of the technical functions in a district, and will progress to technical manager, prior to entering the PPM function as a PM. Some careers will advance beyond the PM position to a position as a function manager either in PPM or in a technical function. The development and training prescribed for this career progression is outlined in the PPM career plans.

PPM Development Plan

Career development plans guide employees in the selection of training and experience needed for job performance and career advancement. Each of the seven functions in the ESRC program has a specific plan for the key positions of its career ladder. The plan for PPM is displayed in Table A-2 starting on page A-5.

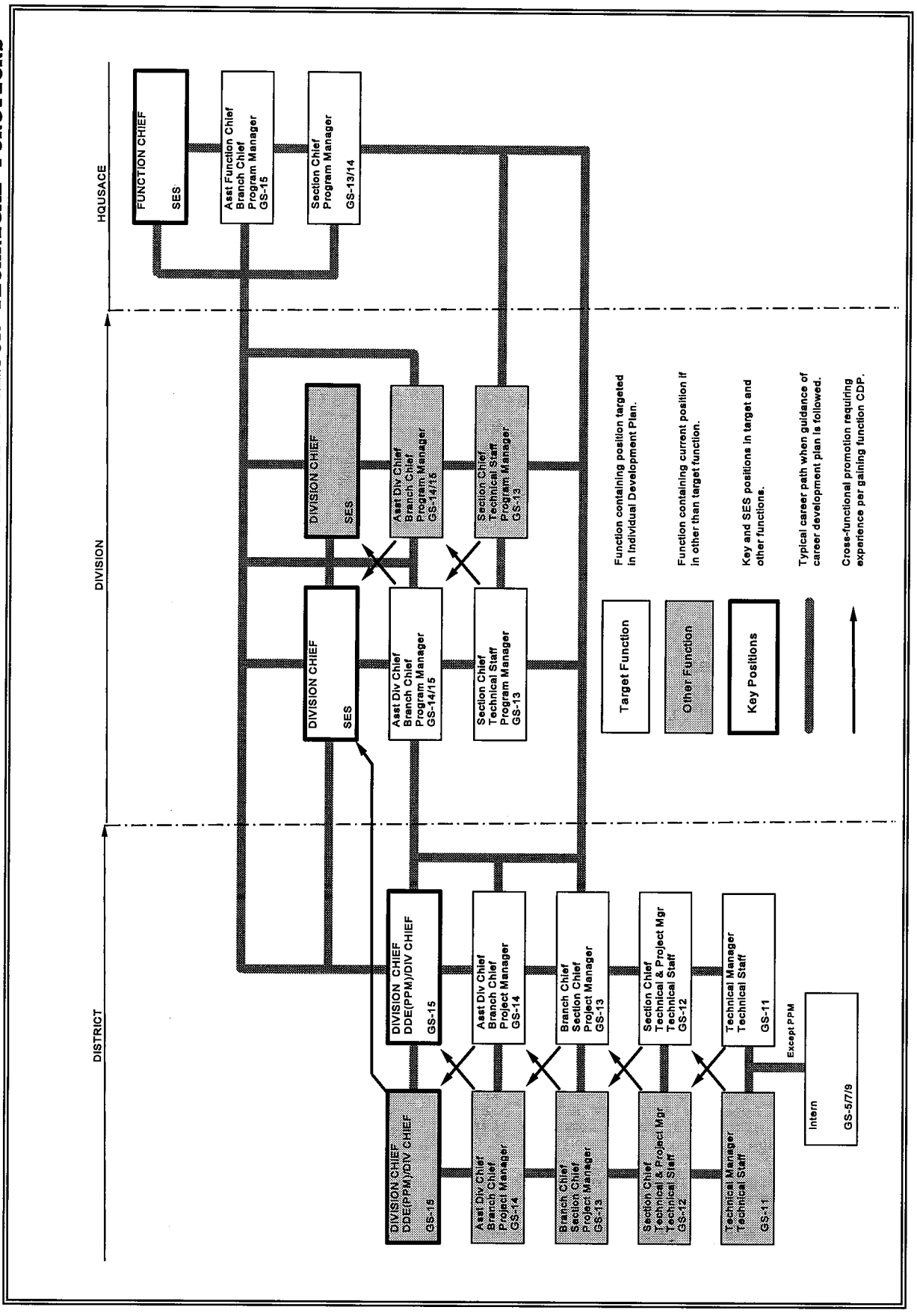
The PPM plan (like each of the others) prescribes formal training, job experience, and developmental assignments for six career levels--from intern to chief of the function. Each of these courses, jobs, and assignments is categorized in accordance with ACTEDS, and is given a priority.[4]

Employees who satisfy the requirements at a career level will be able to perform at that

3. See Section 7 of the ACTEDS plan for a discussion of career management expectations pertaining to mobility.

4. See Table A-2.4 of this Handbook and Section 6 of the ACTEDS plan for an outline and description of these categories and priorities.

TABLE A-1: CAREER LADDER FOR PROGRAMS AND PROJECT MANAGEMENT & MAJOR TECHNICAL FUNCTIONS



level and advance to the next level if/when the opportunity arises. (However, development and training is not the only factor involved in promotion. Employees should consult AR 690-950 for a detailed account of other factors included in the merit promotion system used in the Corps.)

PPM Training Plan

Accompanying each development plan is a master training plan. This plan arrays the training prescribed in the development plan by the ACTEDS categories and priorities, and provides information about each course, job, and assignment to assist employees and supervisors in making appropriate selections. The plan for PPM is displayed in Table A-3 starting on page A-9.

The master training plan includes a list of knowledges, skills, and abilities (KSAs) to be acquired as a result of the training. These numerically coded KSAs are described in the ACTEDS plan.[5] Where employees are presented with a choice, KSAs ought to be considered in selecting training for their Individual Career Development Plans (IDP).[6]

5. See Table A-3.5 of this Handbook and Section 4 and Appendix A of the ACTEDS plan for a general discussion and a complete list of the ESRC KSAs.

6. General guidance on IDPs is provided in the ACTEDS plan, Section 2g, in DA PAM 690-43, Chapter 6, and in ER 350-1-420. Specific guidance for interns is in AR 690-950, Section 3-16.

TRAINING GUIDE

To assist Corps employees plan and manage their careers in PM, a guide focusing on development and training in the field of project management is provided in the following section of this Handbook. This training guide builds upon the elements of career management introduced above, and relates training to the needs of both aspiring and practicing project managers.

3. USING THE PPM CAREER LADDER

1. Identify the position which you aspire to fill in one of the white boxes. It may be a key position or an intermediate position. This is your target position and function.

2. Identify your current position, in a white box if it is in the same function as your target, or in a shaded box if it is in a different function.

3. Identify the paths which you may take to reach your target position, and examine the career development and master training plans for the positions and functions involved.

4. Determine with your supervisor the strategy which you will adopt in your Individual Development Plan to progress toward your immediate and ultimate career goals.

Note: A zig-zag path involving wide functional experience is strongly recommended for careerists seeking key management positions, including programs and project management positions. All career advancement, within and between functions, will be based in part on satisfaction of the career development and training requirements for performance of the target position. Cross-functional laterals are included in typical progression to key positions, while cross-functional promotion is not.

TABLE A-2.2: CAREER DEVELOPMENT PLAN FOR PM AND DDE/CHIEF PPM--GRADE LEVELS 11/12 & 12/13

Grade Level and PM Position	Formal Classroom All Functions	Formal Classroom PPM Function	On-the-Job Experience (plus prof)	Developmental Assignment FOA	Developmental Assignment Higher HQ
Grades 11/12 Project Manager (Junior PM) Technical Staff	+ *Leadership Communication Skills* + *Computer Applications (e.g., PROMIS)* + *Contracting Overview* # *Human Resources I & II*	+ Civil Works Prog Dev & Exec (010) + Civil Works Proj Management (353) + Military Project Management (088) + Environmental/ HTRW PM (260) + Project Mgmt Preparation Courses (see MTP)	★ Project Mgmt Experience: Project *or* Technical Mgr (24 months) # Certification as PMP[1] + Participation Professional Organizations + Computer Literate	★ Planning, Engineering, *or* Construction (12 mos each) + Operations, *or* Facilities (12 mos each)	
Grades 12/13 PPM Section Chief ✓ Project Manager (Journeyman PM) Project Manager (Junior PM) Technical Staff	★ *Leadership Education and Development (LEAD)* ★ *Basic Supervisory Course* ★ *Supervision and Group Performance* # *Seminar for New Managers* # *Human Resources III & IV*	+ Network Analysis Systems (080) + Earned Value Mgmt Systems (TBD) + PCA/Finance Plan Development (315) + Project Mgmt Preparation Courses (see MTP) #$ University LTT #$ Planning and Project Mgmt Associates Program	★ Project Mgmt Experience: Project *or* Technical Mgr (24 months) + Supervisory Experience (12 months) + Certification as PMP[1] + Participation Professional Organizations + Computer Literate	★ Planning, Engineering, *or* Construction (12 mos each) + Operations, *or* Facilities (12 mos each)	#$ MSC/Division Programs and Project Mgmt (6 months)

Note: The ACTEDS training categories and priorities that appear in the legend below are defined in the last part of this table (A-2.4).

✓ Target Position (Development and Training Target)	★ Universal Training MANDATORY (MAND-PR I)	+ Universal Training HIGHLY RECOMMENDED (MAND-PR II)	# Universal Training RECOMMENDED (PR III)	+$ Competitive Trng HIGHLY RECOMMENDED	#$ Competitive Trng RECOMMENDED

1/ The ESRC Career Planning Board is considering PPM's request to designate PMP (Project Management Professional) certification of DDE(PPM)s as Mandatory, Priority I within 3-5 years.

TABLE A-2.1: CAREER DEVELOPMENT PLAN FOR PM AND DDE/CHIEF PPM--GRADE LEVELS 05/07 & 09/11

Grade Level and PM Position	Formal Classroom All Function	Formal Classroom PPM Function	On-the-Job Experience (plus prof)	Developmental Assignment FOA	Developmental Assignment Higher HQ
Grades 05/07 Intern[1]	★ *Intern Leadership Development*	+ Intro to Project Management (762) + Project Mgmt Introduction Courses (see MTP)	★ Rotational Assignments: Planning, Engineering, Operations, Construction, *and* Programs and Project Mgmt (3 mos each)		
Grades 09/11 Technical Staff[1] Intern[1]		+ Basic Project Management (355) + Civil Works Orientation (086) + HTRW Overview (350) + Project Mgmt Introduction Courses (see MTP)	+ Computer Literate # Participation Professional Organizations	★ Programs, Real Estate, Contracting, *and* Facilities (1 month each)	

Note: The ACTEDS training categories and priorities that appear in the legend below are defined in the last part of this table (A-2.4).

✓ Target Position (Development and Training Target)	★ Universal Training MANDATORY (MAND-PR I)	+ Universal Training HIGHLY RECOMMENDED (MAND-PR II)	# Universal Training RECOMMENDED (PR III)	+$ Competitive Trng HIGHLY RECOMMENDED	#$ Competitive Trng RECOMMENDED

1/ PPM participates in the training of interns with rotational assignments in the function, but it is not a target function in the intern program and it does not provide other than rotational work assignments for interns. Nonetheless, interns, and graduated interns who have reached their target positions in other functions, may elect to pursue careers in programs and project management and follow the career development and training guidance contained in the PPM career ladder and the PPM career development and master training plans.

TABLE A-2.3: CAREER DEVELOPMENT PLAN FOR PM AND DDE/CHIEF PPM--GRADE LEVELS 13/14 & 14/15

Grade Level and PM Position	Formal Classroom All Functions	Formal Classroom PPM Function	On-the-Job Experience (plus prof)	Developmental Assignment FOA	Developmental Assignment Higher HQ
Grades 13/14 Asst PPMD Chief PPM Branch Chief PPM Section Chief Project Manager (Senior PM) ✓ Project Manager (Journeyman PM)	★ *Organizational Leadership for Executives-OLE* + *Personnel Mgmt For Executives* # *Administrative Public Policy* +$ *Army Mgmt Staff College* #$ *Senior Service College*	+ PM: Beyond the Techniques (TBD) + Project Mgmt Enhancement Courses (see directory) +$ University LTT #$ Planning and Project Mgmt Associates Program	+ Certification as PMP[1] + Supervisory Experience: Branch *or* Section Chief (12 months) + Participation Professional Organizations + Computer Literate	+$ Another Function (12 months)	+$ MSC/Division Programs and Project Mgmt (6 months)
Grades 14/15 ✓ DDE(PPM)/ PPMD Chief Asst PPMD Chief PPM Branch Chief	# *Exec Development Seminar* # *Exec Excellence* # *Managing Money & Mat'l Resources* #$ *Federal Exec Institute*	+ Project Mgmt Enhancement Courses (see directory) +$ University LTT	+ Certification as PMP[1] + Supervisory Experience: Assistant Division *or* Branch Chief (24 months) + Participation Professional Organizations + Computer Literate	+$ Another Function (12 months)	+$ HQUSACE Programs and Project Mgmt (6 months) #$ Congressional Fellowship (12 months)

Note: The ACTEDS training categories and priorities that appear in the legend below are defined in the last part of this table (A-2.4).

✓ Target Position (Development and Training Target)	★ Universal Training MANDATORY (MAND-PR I)	+ Universal Training HIGHLY RECOMMENDED (MAND-PR II)	# Universal Training RECOMMENDED (PR III)	+$ Competitive Trng HIGHLY RECOMMENDED	#$ Competitive Trng RECOMMENDED

1/ The ESRC Career Planning Board is considering PPM's request to designate PMP (Project Management Professional) certification of DDE(PPM)s as Mandatory, Priority I within 3-5 years.

TABLE A-2.4: DEFINITIONS OF ACTEDS TRAINING CATEGORIES & PRIORITIES FOR ESRC CDPs/MTPs

UNIVERSAL TRAINING

Universal requirements provide standardized KSAs across the occupational area to all individuals who have similar duties and responsibilities. Universal requirements are prioritized to assist commanders in planning and programming for ACTEDS funding. Universal training priorities are as follows:

Mandatory, Priority I (★)

Training that is typically a condition of employment, must be successfully completed within a specified time period, and meets one or more of the following criteria:

- Employee must have for acceptable performance.
- Training is essential for mission accomplishment.
- Training is mandated by higher authority (law or DOD) or is required for certification, health or safety reasons.
- Training is essential, functional training for interns. (Pending approval.)

Mandatory, Priority II [Highly Recommended] (+)

Training that should be successfully completed within a specified time period, but may be delayed if funding is not available, and should meet one or both of the following criteria:

- Employee should have for maximum proficiency.
- Training improves the quality of mission accomplishment.

Recommended, Priority III (#)

This training should be funded after Priority I and II requirements and should meet one or both of the following:

- Provides or enhances KSAs needed on the job.
- Leads to improvement of mission accomplishment.

COMPETITIVE PROFESSIONAL DEVELOPMENT

This category includes developmental opportunities for which individuals are competitively selected. It covers Army-wide competitive programs such as Senior Service Colleges, Fellowship Programs, and the Army Management Staff College (AMSC), as well as CP, career field, or multi disciplinary area-wide competitive programs such as university programs, developmental assignments and training-with-industry. [The following priorities are part of the current ESRC ACTEDS plan.]

Highly Recommended (+$)

Greater importance for career progression.

Recommended (#$)

Lesser importance for career progression.

SOURCE: Draft Army Regulation 690-950, Chapter 1, Section 1-7. Career management objectives, Subsection c. Career development through ACTEDS.

TABLE A-3.1: MASTER TRAINING PLAN FOR PM AND DDE/CHIEF OF PPM PRIORITY I

MANDATORY-PRIORITY I (*)	GRADE LEVEL	DESCRIP-TION	TYPE	SOURCE (PROSPECT)	LENGTH (DAYS)	KSA TO BE ACQUIRED
FORMAL TRAINING COURSES	↓	↓	↓	↓	↓	↓
Org Leadership @ Exec	13/14	M/L	FC	CAL	10	1
Leadership Ed & Devel	12/13	M/L	FC	CAL	5	1,2,3,4,5
Basic Supervisory	12/13	S	FC	VARIES	5-10	3,4,5,18,19
Supervison & Grp Per	12/13	S	FC	VARIES	5-10	4,5,18,19
ON-THE-JOB EXPERIENCE	↓	↓	↓	↓	↓	↓
Proj or Tech Manager	11/13	L/M/F	OJ	DISTRICT	720	1-17,20,21
Rotation Assignments	5/7	F/T	OJ	DISTRICT	360	12,16,20,21
DEVELOPMENT ASSIGNMENTS	↓	↓	↓	↓	↓	↓
Planning Function	11/13	M/F/T	DV	DISTRICT	360	1-17,20,21
Engineering Function	11/13	M/F/T	DV	DISTRICT	360	1-17,20,21
Consrtuction Function	11/13	M/F/T	DV	DISTRICT	360	1-17,20,21
Facilities Engr Func	9/11	M/F/T	DV	MACOM	30	12
Programs Function	9/11	M/F/T	DV	DISTRICT	30	7-9,12
Real Estate Function	9/11	M/F/T	DV	DISTRICT	30	12
Contracting Function	9/11	M/F/T	DV	DISTRICT	30	12,15

Note: A Glossary of Terms and Dictionary of KSAs appear in the last part of this table (A-3.5).

TABLE A-3.2: MASTER TRAINING PLAN FOR PM AND DDE/CHIEF OF PPM PRIORITY II

MANDATORY-PRIORITY II (+)	GRADE LEVEL	DESCRIP-TION	TYPE	SOURCE (PROSPECT)	LENGTH (DAYS)	KSA TO BE ACQUIRED
FORMAL TRAINING COURSES	↓	↓	↓	↓	↓	↓
PM Enhancement Trng	13/15	L/M/F	FC	DIRECTORY	3-5	1-17,21
PM: Beyond Techniques	13/14	L/M/F	FC	USACE (TBD)	5	1-9,12,13,16,21
Personnel Mgmt @ Exec	13/14	M/L	FC	ODCSPER	8	2,4,5,6
Network Analysis Sys	12/13	M/F	FC	USACE (080)	5	7-9,12,13,16,17
Earned Value Mgmt Sys	12/13	M/F	FC	VARIES	3-5	7-9,12,13,16,17
PCA/Finance Plan Dev	12/13	M/F	FC	USACE (315)	4	8,9,12
Leadership Comm Skill	11/13	L/M	FC	USACE (362)	3	1,4,5,10
PM Preparation Trng	11/13	L/M/F	FC	DIRECTORY	3-5	1-17,21
Contracting Overview	11/12	T	FC	VARIES	2-5	15
Computer Applications	11/12	T	FC	VARIES	5	17
Civil Works Prog Dev	11/12	M/F	FC	USACE (010)	4	7-9,12,13,14
Civil Works Proj Mgmt	11/12	M/F	FC	USACE (353)	4	7-9,12,13,14,16
Military Project Mgmt	11/12	M/F	FC	USACE (088)	4	7-9,12,13,14,16
Environmental/HTRW PM	11/12	M/F	FC	USACE (260)	4	7-9,12,13,14,16
Basic Project Mgmt	9/11	M/F	FC	USACE (355)	4	12,13,14,16
CW Orientation	9/11	F/T	FC	USACE (086)	5	12
HTRW Overview	9/11	F/T	FC	USACE (350)	4	12
PM Introduction Trng	5/11	M/F/T	FC	DIRECTORY	3-5	1-17,21
Intro to Project Mgmt	5/7	M/F	TV	USACE (762)	NA	12,13,14,16
ON-THE-JOB EXPERIENCE	↓	↓	↓	↓	↓	↓
Asst Div or Br Chief	14/15	S/L/M	OJ	DISTRICT	720	1-21
Branch or Sect Chief	13/14	S/L/M	OJ	DISTRICT	360	1-21
Certification as PMP	12/15	L/M/F	SD	PMI	NA	1-9,12,16,21
Supervisory Training	12/13	S/L/M	OJ	DISTRICT	360	1-21
Participate Prof Orgs	11/15	L/M/F	SD	VARIES	NA	10,11,12,21
Computer Literate	11/15	M/F/T	OJ	DISTRICT	NA	16,17,21
DEVELOPMENT ASSIGNMENTS	↓	↓	↓	↓	↓	↓
Operations Function	11/13	M/F/T	DV	DISTRICT	360	1-17,20,21
Facilities Engr Func	11/13	M/F/T	DV	MACOM	360	1-17,20,21,23

Note: A Glossary of Terms and Dictionary of KSAs appear in the last part of this table (A-3.5).

TABLE A-3.4: MASTER TRAINING PLAN FOR PM AND DDE/CHIEF OF PPM COMPETITIVE

COMPETITIVE-HIGHLY REC (+$)	GRADE LEVEL	DESCRIP-TION	TYPE	SOURCE	LENGTH (DAYS)	KSA TO BE ACQUIRED
FORMAL TRAINING COURSES	↓	↓	↓	↓	↓	↓
University LTT	13/15	L/M/F	FC	VARIES	360	1-17,20,21
Army Mgmt Staff Clge	13/14	M/L	FC	ODCSPER	95	13,16
DEVELOPMENT ASSIGNMENTS	↓	↓	↓	↓	↓	↓
Prog/Proj Management	14/15	L/M/F	DV	HQUSACE	180	1-17,20,21
Project Develop Func	14/15	L/M/F	DV	DISTRICT	360	1-17,20,21
Prog/Proj Management	13/14	L/M/F	DV	DIVISION	180	1-17,20,21
Project Develop Func	13/14	L/M/F	DV	DISTRICT	360	1-17,20,21

COMPETITIVE-RECOMMENDED (#$)	GRADE LEVEL	DESCRIP-TION	TYPE	SOURCE	LENGTH (DAYS)	KSA TO BE ACQUIRED
FORMAL TRAINING COURSES	↓	↓	↓	↓	↓	↓
Federl Executive Inst	14/15	L/M	FC	OPM	20	1,2,3,9
Senior Service Clge	13/14	L/M	FC	CAL	360	1,7,21
Planning/PM Assoc Prg	12/14	T/F	FC	USACE	360	4,5,12,14,16,18,20
University LTT	12/13	L/M/F	FC	VARIES	360	1-17,20,21
DEVELOPMENT ASSIGNMENTS	↓	↓	↓	↓	↓	↓
Congressnl Fellowship	14/15	L/M	DV	USACE	360	VARIES
Prog/Proj Management	12/13	L/M/F	DV	DIVISION	180	1-17,20,21

Note: A Glossary of Terms and Dictionary of KSAs appear in the last part of this table (A-3.5).

TABLE A-3.3: MASTER TRAINING PLAN FOR PM AND DDE/CHIEF OF PPM PRIORITY III

RECOMMENDED-PIORITY III (#)	GRADE LEVEL	DESCRIP-TION	TYPE	SOURCE (PROSPECT)	LENGTH (DAYS)	KSA TO BE ACQUIRED
FORMAL TRAINING COURSES	↓	↓	↓	↓	↓	↓
Executive Dev Seminar	14/15	L	FC	ESC	10	1,13
Executive Excellence	14/15	L	FC	ESC	10	1,13
Manage Money/Resource	14/15	M	FC	ESC	10	7,8,14
Admin Public Policy	13/14	L	FC	OPM	10	14
Seminar for New Mgrs	12/13	S/M	FC	ESC	10	3,4,5
Human Resources I	11/12	S/M	FC	USACE (301)	5	1-6,18,19
Human Resources II	11/12	S/M	FC	USACE (302)	5	1-6,18,19
Human Resources III	12/13	S/M	FC	USACE (303)	5	1-6,18,19
Human Resources IV	12/13	S/M	FC	USACE (304)	5	1-6,18,19
ON-THE-JOB EXPERIENCE	↓	↓	↓	↓	↓	↓
Certification as PMP	11/12	L/M/F	SD	PMI	NA	1-9,12,16,21
Participate Prof Orgs	9/11	L/M/F	SD	VARIES	NA	10,11,12,21

Note: A Glossary of Terms and Dictionary of KSAs appear in the last part of this table (A-3.5).

TABLE A-3.5: GLOSSARY OF MTP TERMS AND DICTIONARY OF ESRC KSAs

Glossary of MTP Terms

DESCRIPTION	TYPE	SOURCE
S.....Supervisory L.....Leadership M.... Management F.....Functional T.....Technical	FC.....Formal Classroom DV.....Developmental (On-the-Job Training) TV.....Video Taped Course OJ.....On-Job Experience SD.....Self-Development	ODCSPER...Office of Deputy Chief of Staff for Personnel, HQDA OPM.....Office of Personnel Management USACE.....U.S. Army Corps of Engineers (Formal courses are PROSPECT) ALMC.....Army Logistics Management College, Army Material Command CAL.....Center for Army Leadership, Training and Doctrine Command VARIES....Locally determined source MACOM.....Army Major Command, locally determined ESC.....Executive Seminar Center, OPM EHSC.....Army Engineer Housing Support Center, USACE PMI.....Project Management Institute DIRECTORY.Project Management Course Directory

Dictionary of ESRC KSAs

LEADERSHIP/SUPERVISION/MANAGEMENT:

1. Ability to provide organizational leadership, direction and influence in developing and achieving mission goals and objectives.
2. Ability to select, develop motivate and supervise subordinates of varied backgrounds and skills.
3. Ability to delegate authority.
4. Ability to coordinate and integrate work programs of subordinate organizations, peer groups, and higher authority.
5. Skill in establishing and maintaining effective working relationships.
6. Ability to relate organization and mission requirements to training needs.

RESOURCE MANAGEMENT:

7. Ability to assess program requirements and to adjust available resources for optimum efficiency and effectiveness.
8. Ability to execute technical activities within established financial and/or time constraints.

PROGRAMMING/BUDGETING:

9. Ability to accomplish programming and budgeting activities, including long-range planning.

COMMUNICATION:

10. Skill in oral communication and briefings.
11. Skill in written communications.

POLICY/TECHNICAL:

12. Technical competence in assigned activities.
13. Ability to render sound technical decisions in a timely manner.
14. Knowledge and technical application of applicable laws, policies, regulations, and procedures.
15. Knowledge of contract law and contract provisions related to assigned activities.
16. Ability to apply methods and procedures necessary to assure quality end product, such as reports, plans, specifications, construction, and maintenance.
17. Knowledge of automatic data processing (ADP) concepts, systems capabilities, and economic usage to effectively accomplish assigned functions.

PERSONNEL:

18. Personal commitment to equal employment opportunity, incentive awards, career development, and special emphasis programs.
19. Familiarity with personnel policies and procedures.

FUNCTIONAL KSA:

20. Knowledge of laws and requirements that impact on the socio-economic and environmental aspects of various activities and the ability to understand the inter-relationship of socio-economic and environmental goals and implement coordination required in the use of water and land resources. (Civil Works Planning Function, Engineering Function, Operations Function)
21. Knowledge of business, industry, and governmental methods, techniques, organizations, skills, trades, and other factors that affect assigned activities. (All Functions)

22 and 23. Not applicable to PPM.

SOURCE: ACTEDS (Army Civilian Training, Education, and Development System) Engineers and Scientists (Resources and Construction) Plan.

INTRODUCTION

This guide focuses on training and development needed to grow five-star project managers in the Corps. Its recommendations are based in part upon a study of Corps PM career development and training, which included a Corps-wide survey and employed a panel of DDE(PPM) advisors.[7] Both aspiring and practicing PMs will find the guide useful in planning and managing their project management development and training.

Training Objectives

To be a high performance PM in the Corps, the employee needs to be a technology generalist and a management specialist. The PM needs to understand all of the major phases of Corps projects--civil works planning, engineering, construction, and operations, and he/she needs to master management of project development and leadership of management teams. Some special measures are needed to obtain these competencies.

Technology Generalist. For an employee to achieve this status, he/she needs to obtain experience in all of the major technical functions, working with managers of their project phases. This training needs to be obtained through on-the-job experience and developmental assignments, prior to becoming a journeyman project manager.

Management Specialist. To achieve this status, employees need to extend their formal education to include project management, and they need to expand their project management experience.[8] Opportunities to study project management need to be taken by ESRC careerists lacking an adequate background in this field. And, aspiring PMs need experience managing project development, by working as technical managers in most of the Corps functions.

Training Strategy

To achieve these objectives, a broad and balanced approach to PM training and development is needed. Both formal training and work experience are needed in both project development and project management. Both Corps supported training and employee self-development activities are needed. And, both required and elective training are needed to satisfy both the needs of the Corps and the employee.

The PM Training Guide is designed to assist the employee identify the right training at the right time in his/her PM career. It builds upon the PPM ACTEDS plan and provides a road map that describes the training and development route to the knowledge and skill needed to be a five-star PM in the Corps.

7. The methods and results of this Institute for Water Resources study are summarized in IWR Report 95-R-11: "Project Management Career Development and Training: Needs Assessment and Strategy Development". The Institute for Water Resources. December 1995.

8. Educated as engineers and scientists, ESRC careerists enter the Corps lacking management training or experience, project or functional.

FRAMEWORK

Opportunities for development and training are grouped into three general categories in this Guide: Self-Development Activities, Work Assignment Training, and Formal Classroom Training.

Self-Development Activities

These are voluntary activities initiated and conducted by the employee, who bears the full burden of the time and money required. These activities are encouraged by management, but they are not supported with government funds. They include academic courses, individual studies, professional career involvements, and other off-the-job kinds of activities.

The remaining categories of opportunity for development and training contrast with Self-Development Activities in that they are both supported by government resources, including management direction of their use by individual employees.

Work Assignment Training

This is experiential learning obtained through working in a position in an organization. It has three basic forms: On-the-Job Training occurs while an individual is working in his/her permanent position or work assignment. Developmental Assignments are jobs occupied temporarily for the purpose of training. And, Rotational Assignments are the special series of developmental work assignments given to interns.

Formal Classroom Training

This is institutional learning provided in courses of formal instruction. The majority of it involves classes of students taught by teachers or trainers. However, other formal training consists of video taped and/or televised instruction of groups or individuals, either self-administered or facilitated. Government and non-government sources both provide Formal Classroom Training.

This training category is reserved for training that is sponsored by the employer of the student, and normally occurs during his/her duty hours. It can be short-term or long-term, local or requiring temporary duty. It is taken with the advice and consent of management. Formal training obtained otherwise is a Self-Development Activity.

There are three general levels of project management training, and various types of formal training courses.

Introduction Training

This is training designed to introduce (new) employees to Corps project development and project management. All Corps employees need to be afforded the opportunity and benefit of exposure to one or more courses at this level of training. ESRC interns are encouraged to explore the full range of introduction courses, as a means of identifying and/or verifying their interest in pursuing a career in project management. All courses at this level deal broadly with the concepts and processes of

project and product development and their management.

Preparation Training

This is training designed to help employees prepare to be technical and project managers. It will help them perform the full set of duties incorporated in these PM roles upon their selection for the positions. The preparation courses are intended for employees who have adopted project management as their career, and are made available to others for whom the training is likely to be of benefit in job performance and career advancement. Courses at this level include:

Generic Survey Courses of concepts, methods, techniques, and tools used routinely in project management, regardless of the specific project or mission (civil works, military, or environmental). This kind of training tends to emphasize either relational (people) or informational (process) KSAPs (knowledge, skills, abilities, and personal characteristics). Some Generic Survey Courses may be considered prerequisites for Mission Process and Generic Focus Courses, also included as part of the preparation level of training.

Mission Process Courses are designed to provide basic knowledge and skills needed to manage projects and products within each of the three major missions of the Corps. These courses teach the process of the mission, to include its particular application of tools and techniques used commonly in project management; they use case study and/or simulation instructional methods and they incorporate KSAPs in both the relational and informational categories.

Generic Focus Courses provide knowledge and skills in one or a set of related tools and techniques applied commonly in all of the mission processes. These learning opportunities serve 1) to prepare aspiring project managers to utilize tools and techniques required to perform their anticipated roles as project and technical managers, and 2) to hone the skills of practicing technical specialists who are assisting with project management in their respective functions.

Enhancement Training

This is training designed to enhance the knowledge and skills of already practicing project and technical managers. These courses are predominately generic (not specific to any mission or project) and usually commercial or interagency in origin. They include:

Advanced Survey Courses which catalog and characterize the state-of-the-art scientific and technical foundations and new developments in the field of project management. They may cover the full spectrum of KSAPs or emphasize relational or informational topics.

Generic Process Courses provide knowledge and skills which are universally applied in project management. They tend to be designed around the case study or the simulation method of teaching (where role playing occurs, often in group context and sometimes computer-based). These experiences compress time and expand roles.

Advanced Focus Courses tend to be divided into relational and informational categories, and, like their preparation level counterparts, are generic and focus on one or a few related techniques and tools. These advanced courses broaden the knowledge and sharpen the skills needed by practicing project managers to excel in their work.

GUIDANCE

These training parameters are brought together in the matrix of general guidance displayed in Table B-1 on page B-9. This general guidance suggests the kinds of training needed in each of the three phases of PM career development. The three phases used in this training guidance roughly align with the grade levels of the PPM career development plan as follows:

TRAINING PHASE	GRADE LEVELS
Introduction	05/07, 09/11
Preparation	11/12, 12/13
Enhancement	13/14, 14/15

At each phase of training, the employee needs to pursue training opportunities in each of the three general categories of training.

Introduction to Projects and Project Management (Phase 1)

The training suggested for the introduction phase of PM career development appears in Table B-2.1 appended on page B-10.

Work Assignment Training. The Guide recommends Rotational Assignments in nine functional areas: Three months in project management and in each of the four major technical functions, and one month in each of the remaining functions listed. These nine assignments total more than one and one-half years of developmental work as an intern. It is recommended that interns work under the tutelage of project managers and technical managers where possible.

When not on a Rotational Assignment, it is recommended that interns seek special opportunities to learn about projects and their management, including special assignments and routine instruction on the job. Mentoring from their supervisors and coworkers is encouraged.

Formal Classroom Training. Without interfering with Work Assignment Training, Formal Classroom Training is obtained to round out the introduction to Corps project management. Formal Classroom Training is limited to courses designed to introduce the intern to the basics of project management and to the basics of Corps business in each of the three main mission areas. Selected technical courses are also taken to help the intern learn how to apply his/her specialty to Corps project development and operations.

Self-Development Activity. The intern is encouraged to pursue outside activities which expose him/her to the theory and the practice of his/her discipline and profession, and generally add to the ability to perform and advance. Activities such as extension courses at a local university, participation in public speaking groups like Toastmasters and International Training in Communication

(ITC), and memberships in professional associations, to include the Project Management Institute, are recommended. It is vastly important that the employee show initiative and determination during his/her early years on the job.

Preparation for Performing Project Management (Phase 2)

The training suggested for the preparation phase of PM career development appears in Table B-2.2 on page B-11. The length of this period of career development and training may vary a great deal, from three to a dozen or more years. Two key determining factors are the progress of the individual and the job opportunities in the organization. The goal is to advance when prepared, but not before. The strategy of this Guide affords the advantage of many PM careerists practicing project management as technical managers at this phase, a great benefit to both them and their organizations.

Work Assignment Training. The objective of Work Assignment Training at this phase is to continue the process (started as an intern) of becoming a technology generalist and a management specialist. The employee needs developmental assignments of between six and 12 months in each of the critical technical functions and in project management. These work assignments need to involve performing the duties of the technical and project managers. The permanent work assignments during this phase of development need to be as technical managers, and/or as technical specialists working as assistants to either project or technical managers.

Formal Classroom Training. It is during the preparation phase that the majority of required and recommended courses are taken. The main objective is to gain a working knowledge of the project development and project management processes. Employees need to start with Generic Survey Courses to learn the fundamentals of project management, then move on to Mission Process Courses to learn how the Corps develops projects in the three major missions, and then switch to Generic and Mission Focus Courses to delve further into how projects are developed and managed.

In this Guide, the Generic Focus Courses are divided into:

- o Leadership Qualities,
- o Management Functions,
- o Communication Skills, and
- o Computer Applications.

Employees need to pursue a balanced curriculum consisting of courses from each group.

Leadership Qualities. Courses dealing with Leadership Qualities are very important. They address what employees need to know about people, about organizations, and about themselves, to help them acquire the potential to be effective leaders of project management teams. These courses need to be complemented with work assignments and with outside activities which provide opportunities to apply the knowledge and develop the skills learned.

Communication Skills. In addition to leadership skills, project management requires good communication skills. The processes of both informing and influencing people depend upon these basic skills. Courses in speaking and writing need to be included in PM career training. Again, ample opportunities to practice are necessary if the skills are to be adequately developed.

Management Functions. Courses about the functions of project management are common, and may contain some overlap with the basic subjects just discussed (for example, human resources will often include a leadership element). These courses deal with the special technical aspects of project management, what is done and how it is done. The challenge and the benefit of these PM subjects will vary from one person to another, depending upon their formal education, work experience, and other factors. Employees need to determine through PM survey courses and work assignments where their needs lie.

The list of eight project management functions in Table B-2.2 is that used by the Project Management Institute (PMI) in its Body of Knowledge (PMBOK). PMI publishes books and pamphlets dealing with these subjects,[9] and some of its chapters offer related courses. While neither can substitute for Focus Courses, both can help employees to determine their strengths and weaknesses.

Computer Applications. Most of the relevant computer applications focus on methods and techniques used in one or more of the project management functions. The most common are computer programs incorporating some form of the work breakdown structure (WBS), Gantt chart, project evaluation and review technique (PERT), and critical path method (CPM). Included are the software packages used by the project managers in the Corps: Microsoft Project, Open Plan, Primavera Project Planner and Time Line.

These are the work horses for routine project management in the Corps. Some of these packages and other computer programs provide tools for other functions.[10] Most notable are programs for using Monte Carlo simulations and expert knowledge systems in project planning and risk management. At some point these may be of interest.

Finally, a general note on Selected Technical Courses. This type of Formal Classroom Training is included at all phases of the Guide. These courses are included to help employees stay current with their technical specialties. This adds to their intellectual and professional strength, and helps to bolsters their career flexibility.

9. For a description of project management publications from PMI and others, see the *Project Manager's Resource Expo: 1994/1995 Publications Catalog.* Project Management Institute, 130 South State Road, Upper Darby, PA 19082, 610/734-3330, or visit their home page at "http://www.pmi.org".

10. PMI publishes an annual software survey. See "1995 Project Management Software Survey", *PM Network*, Volume IX, Number 7, July 1995 (pages 35-48), and "1995 SourceGuide: A Compendium of Project Management and Project Management-Related Software", *PM Network*, Volume IX, Number 6, June 1995 (pages 20-27).

Self-Development Activity. During the introduction phase of career development, interns are dedicated to learning--it's their job. But, during later phases of career development, employees are expected to contribute full shares to the work of their organizations. Nonetheless, learning remains very important and needs to continue. This is why Work Assignments are critical, they combine working and learning. It is also why Self-Development is expected of all professional employees. Career development and training is a partnership between the employee and his/her organization, and Self-Development is part of the deal. It is also smart in a competitive job market (inside and outside the organization).

Many of us, however, find Self-Development difficult to pursue. More than the time and money required, the need to "plan and manage" the activity stops or slows many of us. As with most pursuits, if we have a clear goal in mind and some way of organizing our efforts, we find progress a lot easier. Two such goals and methods can help with PM careers: One is preparing to be certified by PMI as a Project Management Professional (PMP), the other is studying to obtain a degree or a Master's certificate in project management. Employees are encouraged to do both, and to combine them if possible.[11]

Enhancement of Key Project Management Skills (Phase 3)

The training suggested for the third and last phase of PM career development appears in Table B-2.3 on page B-12. The outlines of this phase echo those of the preparation phase. Except that during this phase most of the PM careerists are project or technical managers, and their career development and training objective is to enhance their ability to perform their jobs and advance the state-of-the-art of project management in the Corps.

Work Assignment Training. More so during this phase than before, learning needs to occur on-the-job, and not take the manager away from his/her work. Employees need to find more challenging projects and need to practice more challenging management methods. Otherwise they will rob themselves and their organizations of the best opportunity they have to learn and to progress.

Opportunities will arise for developmental assignments, and these need to be taken when they are mutually advantageous. One possibility is to arrange a temporary job exchange with a person having a similar level of management responsibility but a different kind of project challenge. Assignments and exchanges could occur anywhere within the Corps, and between the Corps and other federal, state, or local agencies.[12]

11. The George Washington University and the Educational Services Institute (ESI) offer a Master's Certificate Program geared to the PMI PMBOK. See *Project Management Catalog,* ESI, 2775 South Quincy Street, Suite 500, Arlington, VA 22206-2260, 703/578-8820. Also see Notes 13 and 15, and the Course Directory.

12. The Intergovernmental Personnel Act of 1970 provides for temporary assignments to other government and related organizations. Policy and procedures are setforth in AR 600-300, Chapter 334, and ER 690-1-334 (which includes a list of government-related organizations eligible under the IPA).

Formal Classroom Training. The goal is for more advanced training during this phase of career development, and the selection of courses narrows considerably. However, many employees will find themselves practicing project management before they have taken full advantage of the classroom training suggested for the preparation phase of the PM career. For them, many of the preparation courses will be enhancement. At some point, however, either by reason of their training or experience, they will need to focus on the more advanced and longer term training.

Care needs to be taken in identifying "advanced courses" in project management. What is "advanced" for one individual may not be for another. It is best to explore each situation carefully. If multiple sources indicate that the course will serve to enhance needed skills, then consider it further.

Universities are a good source of advanced training in project management. A growing number of universities offer graduate courses, programs, and degrees in project management and in related fields.[13] Those with graduate programs afford an opportunity for project managers to obtain long term training (LTT) by enrolling for a semester or full year. Such LTT opportunities are available to project managers through the HQUSACE Sponsored LTT Program and the HQDA Civilian Competitive Professional Development Program.[14]

Self-Development Activity. The profession if not the practice of project management is rather young. An implication of this is that the science and the art of project management is still being standardized and codified into a field of study. During this period, it is imperative that project managers in the Corps get involved in their (maturing) profession. Being a part of the change is the best way to keep abreast of it. PM careerists are encouraged to participate in PMI, the Project Management Institute,[15] and are encouraged to pursue continuing education at a local university or college.

13. PMI conducts an annual survey of academic institutions offering courses, certificates, and degrees in project management and related fields, see "The 1995 Project Management Education Survey". *PM Network*, Volume IX, Number 9, September 1995 (pages 33-39). PMI also prints a "Directory of Vendors Offering Training in Project Management" each year. See *PM Network*, Volume VIII, Number 10, October 1994 (pages 49-51).

14. For policy and procedures pertaining to the HQUSACE Sponsored LTT Program see ER 350-1-416, and for information regarding the HQDA Civilian Competitive Professional Development Program see the "FY96 Catalog of Civilian Training, Education & Professional Development Opportunities".

15. For information on PMI membership, publications, and certification contact the Project Management Institute, 130 South State Road, Upper Darby, PA 19082, 610/734-3330, or visit their home page at "http://www.pmi.org".

TABLE B-1: PM TRAINING GUIDE--SUMMARY OF PROJECT MANAGEMENT CAREER DEVELOPMENT & TRAINING

		WORK ASSIGNMENT TRAINING *(On-Job & Developmental)*	FORMAL CLASSROOM TRAINING *(Govt & Non-Govt Courses)*	SELF-DEVELOPMENT ACTIVITY *(Courses, Reading, Other)*
PHASE 3:	**ENHANCEMENT OF KEY PROJECT MANAGEMENT SKILLS** *PM Positions:* *Project Manager & Technical Manager*	*Emphasis:* **On-The-Job Experience** *more than* **Developmental Assignments**	*Sequence:* **Advanced Focus** *or* **Advanced Survey** *or* **Generic Process**	**Educational Courses & Readings** **Professional Participation** *with* **Professional Certification**
PHASE 2:	**PREPARATION FOR PERFORMING PROJECT MANAGEMENT** *PM Positions:* *Technical Manager & Technical Specialist*	*Emphasis:* **Developmental Assignments** *as much as* **On-The-Job Experience**	*Sequence:* **Generic & Mission Focus** *after* **Mission Process** *after* **Generic Survey**	**Educational Courses & Readings** **Professional Participation** *toward* **Professional Certification**
PHASE 1:	**INTRODUCTION TO PROJECTS AND PROJECT MANAGEMENT** *PM Positions:* *Technical Specialist & Technical Intern*	*Emphasis:* **Rotational Assignments** *more than* **On-The-Job Experience**	*Sequence:* **Mission Overview** *after* **Generic Overview**	**Educational Courses & Readings** **Professional Membership** *and* **Professional Participation**

TABLE B-2.1: PM TRAINING GUIDE--PHASE 1--INTRODUCTION TO PROJECTS AND PROJECT MANAGEMENT

WORK ASSIGNMENT TRAINING
(On-Job & Developmental)

Rotational Assignments in the following 9 functions[1]
3 months in each of below:
- ☐ Project management
- ☐ Planning
- ☐ Engineering
- ☐ Construction
- ☐ Operations

1 month in each of below:
- ☐ Programs
- ☐ Real estate
- ☐ Contracting
- ☐ Facilities engr

Special Assignments

Instruction on the Job

Discussions w/ Supervisor

Discussions w/ Employees

1/ Assigned to Project Manager or Technical Manager where possible

2/ Design/Build Functions:
- Planning
- Engineering
- Construction
- Operations

FORMAL CLASSROOM TRAINING
(Govt & Non-Govt Courses)

GENERIC OVERVIEW COURSES
Overviews of Universal PM Concepts, Methods, Process
- ● Project Mgmt (762:1)
- ○ Project Mgmt (762:2-4)
- ● Project Mgmt (355)

MISSION OVERVIEW COURSES
Overviews of Corps Mission Related Business Processes
- ● Civil Works (086)
- ○ Military Programs
- ● Environmental/HTRW (350)

SELECTED TECHNICAL COURSES
Courses Pertaining to the Intern's Specialty Area(s)
- ☐ University Discipline
- ☐ Design/Build Function[2]

SELF-DEVELOPMENT ACTIVITY
(Courses, Reading, Other)

Academic Extension Courses

Individual Reading and Study

Oral and Written Communication

Engineer-in-Training (EIT) Certificate *(if appropriate)*

Membership in Professional Associations

Membership in the Project Management Institute (PMI)

- ● Actual existing course
- ○ Course to be developed
- ☐ A category of training

See Directory for details.

TABLE B-2.2: PM TRAINING GUIDE--PHASE 2--PREPARATION FOR PERFORMING PROJECT MANAGEMENT

WORK ASSIGNMENT TRAINING *(On-Job & Developmental)*	**FORMAL CLASSROOM TRAINING** *(Govt & Non-Govt Courses)*	**SELF-DEVELOPMENT ACTIVITY** *(Courses, Reading, Other)*
Developmental Assignments in Project Management and Technical Management jobs (six to 12 months each) Continued Journeyman Work Assignments	GENERIC SURVEY COURSES *Surveys of Universal PM Concepts, Methods, Tools* ● Project Ldrship (PSG-03) ● The Complete PM (PSG-01) MISSION PROCESS COURSES *Courses on Corps Mission Project and Mgmt Processes* ● CW Prog Dev & Exe (010) ● Civil Works (353) ● Military Programs (088) ● Environmental/HTRW (260) GENERIC FOCUS COURSES *Courses Focused on Set of Universal PM Techs & Tools* ☐ Leadership Qualities ☐ Management Functions[1] ● Network Analysis (080) ● Earned Val Mgmt (PFM-19) ☐ Communication Skills ☐ Computer Application MISSION FOCUS COURSES *Courses Focused on Mission PM Concepts and Techniques* ● PCA/Fin Plan Devel (315) SELECTED TECHNICAL COURSES *Courses Pertaining to the Worker's Specialty Area(s)* ☐ University Discipline ☐ Design/Build Function[2]	Academic Extension Courses Individual Reading and Study Oral and Written Communication Participation in Professional Associations Participation in Project Management Institute (PMI) Preparation for PMI PMP[3] Certification Professional Registration or Certification

1/ Management Functions:
- Planning
- Organizing
- Monitoring
- Controlling

and
- Scope Management
- Cost Management
- Time Management
- Human Resources Mgmt
- Quality Management
- Risk Management
- Contract Management
- Communications Mgmt

2/ Design/Build Function:
- Planning
- Engineering
- Construction
- Operations

3/ Project Management Professional

● Actual existing course

○ Course to be developed

☐ A category of training

See Directory for details.

TABLE B-2.3: PM TRAINING GUIDE -- PHASE 3 -- ENHANCEMENT OF KEY PROJECT MANAGEMENT SKILLS

WORK ASSIGNMENT TRAINING
(On-Job & Developmental)

Developmental Assignments in Project Management and Technical Management Jobs (same and other echelons)

IPA/Interagency Personnel Agreement Assignment with Other Governmental Agency (or qualifying customer)

1/ Management Functions:
- Planning
- Organizing
- Monitoring
- Controlling

and
- Scope Management
- Cost Management
- Time Management
- Human Resources Mgmt
- Quality Management
- Risk Management
- Contract Management
- Communications Mgmt

2/ Design/Build Function:
- Planning
- Engineering
- Construction
- Operations

3/ Project Management Professional

FORMAL CLASSROOM TRAINING
(Govt & Non-Govt Courses)

ADVANCED SURVEY COURSES
Surveys of Universal PM Concepts, Methods, Tools
- ● PPM Associates Program
- ● PM Beyond Techs (ESG-01)
- ☐ LTT in Degree Programs

GENERIC PROCESS COURSES
Advanced Workshop Courses on PM Concept and Process
- ● PM Applications (EPG-01)

ADVANCED FOCUS: GENERIC
Advanced Courses Focused on PM Techniques and Tools
- ☐ Leadership Qualities
- ☐ Management Functions[1]
- ☐ Communication Skills
- ☐ Computer Application

ADVANCED FOCUS: MISSION
Advanced Courses on Corps Mission PM Concepts/Tools
- ○ CW Prog Execution (TBD)

SELECTED TECHNICAL COURSES
Courses Pertaining to the Worker's Specialty Area(s)
- ☐ University Discipline
- ☐ Design/Build Function[2]

SELF-DEVELOPMENT ACTIVITY
(Courses, Reading, Other)

Academic Extension Courses

Individual Reading and Study

Oral and Written Communication

Participation in Professional Associations

Professional Registration

Participation in Project Management Institute (PMI)

PMI PMP[3] Certification

- ● Actual existing course
- ○ Course to be developed
- ☐ A category of training

See Directory for details.

USING THE DIRECTORY

INTRODUCTION

The Project Management Course Directory is provided to help project managers and other members of project teams find the Formal Classroom Training which best satisfies their project management training needs. The Directory contains training for project management roles, and does not include courses on technical subjects also needed for the successful development and operation of Corps projects. The Directory is designed to be a "living" document, and will be updated regularly with the help of its users.

The Course Entries

Each course in the Directory is described on a separate page using a standard format and a standard set of terms. Please refer to the first page in the Directory for an example.

Entry Format. Each entry in the Directory contains a TITLE and a description of what the course is ABOUT. In addition it contains sections focusing on the subject matter of the course, and on the details of the course offering. Some of these sections contain fixed data, which are underlined if they apply to the course. For example, the first entry in the Directory is an Introduction LEVEL course (not Preparation or Enhancement). The sections are described below:

TITLE. This section provides the name given the course by the agency or vendor. And, if it is a PROSPECT course, its number is in (parentheses).

LEVEL, SCOPE, REALM. This section indicates *who* the course is best suited for (LEVEL and REALM); *where* in the business it fits (REALM); and, *how* it treats the subject matter of project management (SCOPE).

FIRST. This section simply lists any prerequisites that pertain to the course, whether they be training, experience, or position.

TOPIC, TASKS, PMBOK[16]. These items only apply if the SCOPE of the course is Focus. They serve to identify *what* aspects of project management are in the course's focus.

METHOD, MEDIUM. This section provides basic data on *how* the course is taught. Since more than one METHOD may be used in a course, the predominate one is indicated (if known). Each MEDIUM used is underlined.

LENGTH, LOCALE, PLACES, OFFERS, SERIES. This section outlines the essential parameters of the course offering. Definitive data about time and location need to be obtained from the

16. The Project Management Institute's Project Management Body of Knowledge. See Note 20.

Purple Book[17], from the Army's Training Resource Access Information Network (TRAIN)[18], or directly from the SOURCE.

SOURCE. This section contains the identity and address of the agency or vendor responsible for the course, and (usually) a point of contact and telephone number.

PRICE. This section reports the per student tuition (and fees if any) for the course. This data is provided for planning purposes only, and needs to be confirmed at the time of registration.

ABOUT. This section contains a general description of the course taken from literature provided by the SOURCE.

RATING. This section is for future use. It will indicate the evaluations of employees who have taken the course.

Entry Terms. The terms used in the course entries are defined in the dictionary in Table C-1 starting on page C-6. The meanings of most of these terms are clear, but some are not. Check the dictionary if in doubt. The steps for making best use of the Directory (see below) provide a basic understanding of these terms.

Directory Organization

The Directory is divided into three major sections by tabs denoting the LEVEL of training for which the course entries are best suited: Introduction, Preparation, or Enhancement. Within these major sections, the entries are grouped in terms of the SCOPE, REALM, and in the case of Generic courses by their general Focus. In the right margin of each entry are three index tabs reflecting these major divisions and subdivisions. The contents of the Directory are outlined in Box 4 below.

4. TRAINING DIRECTORY OUTLINE

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INTRODUCTION TRAINING.......TAB 1
  o Generic Overviews
  o Mission Overviews
PREPARATION COURSES.........TAB 2
  o Generic Survey Courses
  o Mission Process Courses
  o Basic Focus Courses
      - Generic Subjects
          * Leadership Qualities
          * Management Functions
          * Communication Skills
          * Computer Application
      - Mission Subjects
ENHANCEMENT TRAINING........TAB 3
  o Advanced Survey Courses
  o Generic Process Courses
  o Advanced Focus Courses
      - Generic Subjects
          * Leadership Qualities
          * Management Functions
          * Communication Skills
          * Computer Application
      - Mission Subjects
```

SELECTING COURSES

The Directory complements the PM Training Guide. It contains courses to consider for the Formal Classroom Training that is recommended in the Guide. Users of the Directory should consult the Guide to determine their training needs (with

17. The Purple Book is the Corps Managers and Surpervisors Training Handbook, published each fiscal year by the Huntsville Division. It lists PROSPECT and other courses available in a particular year, and contains information about long term training and Army schools and training centers.

18. The Training Resource Access Information Network. Provided through TimePlace, Inc., 460 Totten Pond Rd, Waltham, MA 02154-1906, (800)544-4023 or (617)890-4636.

their supervisor), and use the Directory to identify courses to include in their Individual Development Plan.

Each entry contains as many as 20 items of information about its course. In addition to its TITLE and a description of what the course is ABOUT, data are provided to help users select the course that best meets their needs. Most of the information included describes the subject matter of the course and the details of the offering. The first allows users to compare courses with their training needs, and the second allows them to consider their schedules, budgets, and related details.

Five Basic Steps

After the needed LEVEL and kinds of Formal Classroom Training have been determined, these basic steps can be followed to select courses for the Individual Development Plan:

Step 1. Use the index tabs to locate the section of the Directory most likely to contain the LEVEL and kind of course needed. For example, a Generic Survey course at the Introduction LEVEL (like the the first entry in the Directory).

Step 2. Page through the section to find the particular kind of course needed. At this point, the search typically will be for a course dealing with a specific Focus. For example, a Generic course at the Preparation LEVEL with a Focus on Leadership or Management.

Step 3. Examine all of the entries for the particular kind of course needed. Read the brief description to see what the course is ABOUT, check FIRST to see if all of any prerequisites have been met, and note the RATINGS.[19]

[Keep in mind that course prerequisites are intended to increase the likelihood that a student will experience optimal give (contribution) and take (benefit) from participation in the course. They should be observed.]

Step 4. For the courses which seem to best meet the training need, examine the class offering details to find a match with schedule and budget needs.

[To gauge travel, per diem, and tuition costs, consider the LENGTH, LOCALE, PLACES, and PRICE of the course. To fit pertinent personal and business schedules, check the LENGTH of the course and the times the source OFFERS it.]

Step 5. Contact the SOURCE of the course for further information and references. Vendors will fax or mail materials when requested, including names of Corps personnel and others who have taken their courses.

[Inquire with coworkers and local training officers about the courses of interest. They will likely have information or offer leads to pursue. Try to obtain reliable

19. See Evaluating Courses below.

recommendations and use them to make a final decision.]

Can't Find One? What if a "target" course is not found? Improvise with Step 5 above. Contact SOURCES of "close" courses, and inquire about similar offerings. Talk with coworkers and the local training officer. Contact the local university.

Another good source is the Project Management Institute. PMI is dedicated to the promotion of project management and to the education of its practitioners. Consult its publications and contact its local chapter or national headquarters for training opportunities.[20]

UPDATING DIRECTORY

This Directory is of value to the extent that it is, and remains, concise and current. It should contain up-to-date information on courses focused on project management. And, because it can't catalog all such courses, it should strive to direct its users to the best of the lot.

This initial edition of the Directory contains the best courses that IWR could identify from its survey of publications and data bases. They represent the kinds of Formal Classroom Training specified in the PM Training Guide.

Bottom-Up Approach

As more and better courses come to light, the Directory will be updated and amended to maintain and improve its value. A "bottom-up" process will be used to identify new courses and evaluate those already included in the Directory.

There is perhaps no better source of information about project management courses than Corps project managers who have taken them. Users of the Directory will be called upon to identify and evaluate its courses, and a volunteer panel of users will be formed to advise IWR on future editions of the Directory. (See Box 5.)

5. TEAM OF DIRECTORY ADVISORS

A seven member panel of Project Managers will be formed to advise IWR on future editions of the Directory. Each year, this Directory Advisory Team (DAT) will review course data and make recommendations on the content of the Directory. DAT members will serve staggered, three-year terms, and will be drawn from a pool of volunteers on the basis of experience in project management.

Nominating Courses

Project Managers and other users of this Directory are asked to nominate courses to be included in future editions. Nominated courses will be screened by IWR with the help of DAT. Those courses meeting the criteria for selection will be added to the Directory.

20. For information on PMI membership, publications, and certification contact the Project Management Institute, 130 South State Road, Upper Darby, PA 19082, 610/734-3330, or visit their home page at "http://www.pmi.org".

Table C-2 starting on page C-9 contains full instructions and a form to be used to nominate courses for the Directory. Nominations are restricted to courses that have been taken by members of project management teams.

To revise this initial edition of the Directory, all courses taken in the last three years (1993-1995) may be nominated. After the first annual cycle, only those taken in the current year will be eligible. IWR and DAT will determine which and how many courses to add to future editions.

Evaluating Courses

Most of the courses in this initial edition of the Directory have no RATINGS. Only those for which first-hand knowledge was available have been rated on the quality scale at the bottom of the entry form. Eventually most courses in the Directory will have a RATING.

Users of the Directory are asked to provide RATINGS of courses taken so that other users may use that information in choosing courses. Courses that are newly identified will carry the RATING of their nominators until they are rated by other users who have taken them.

Each year, users who have taken courses listed in the Directory will be asked to complete the form found in Table C-2 (on pages C-9 and C-10) for each course taken, and forward the form(s) directly to IWR. These RATINGS will be recorded and the modal ratings will be included in the next update of the Directory.

To establish a baseline for the courses in this initial edition, users are asked to complete a form for each of the listed courses taken within the last three years. The results of this "survey" will be included in the next edition.

TABLE C-1: DICTIONARY OF TERMS USED IN DIRECTORY OF PM COURSES

TITLE: Complete title of the course, and PROSPECT course number if any.

LEVEL: Optimal level of the training (see Plan Handbook):

- **Introduction**..... Elementary training primarily for Interns and other beginners.
- **Preparation**..... Foundation training for aspiring Technical & Project Managers.
- **Enhancement**..... Advanced training for practicing Technical & Project Managers.

SCOPE: Breadth/depth of the training (see Plan Handbook):

- **Survey**..... Wide range of topics, shallow in coverage.
- **Process**..... Procedures/techniques, narrow in coverage.
- **Focus**..... One, few related topics, covered in depth.

REALM: Specificity of training vis-a-vis major missions:

- **Generic**..... Topics have universal application.
- **Civil Works**..... Topics are unique to this mission.
- **Military**..... Topics are unique to this mission.
- **HTRW/Environ**..... Topics are unique to this mission.

FIRST: Training, work experience, and position recommended as the minimum preparation.

TOPIC: General substantive orientation of the training:

- **People/Relational**..... Primary subject is how to relate and communicate with all others.
- **Process/Informational**.. Primary subject is how to manage project resources (time & money).

[continued]

TABLE C-1: DICTIONARY OF TERMS USED IN DIRECTORY OF PM COURSES

TASKS: Basic functions/objectives of project management:

Lead..... Directing, motivating, and inspiring people.

Plan..... Identify objectives and means to accomplish.

Organize. Coordinate people/resources to execute plan.

Monitor.. Measure progress for variance from the plan.

Control.. Take required preventive/corrective actions.

PMBOK: Explicit coverage of the eight project management functions in Project Management Body of Knowledge (PMBOK) published by Project Management Institute:

Scope..... Maintain focus on customer's aims, goals, and objectives.

Cost..... Ensure completion within the approved budget.

Time..... Ensure timely performance of work and activities.

Human Resource..... Make the most effective use of people involved.

Quality..... Ensure satisfaction of the needs being addressed.

Risk..... Identify, analyze, and respond to the uncertainties.

Communications..... Ensure proper collection/dissemination of information.

Contract..... Acquire goods and services from outside organizations.

TOOLS: Specific tools about which instruction is provided; for example, a computer software package for performing the planning and monitoring of projects (Premivera, etc.).

[continued]

TABLE C-1: DICTIONARY OF TERMS USED IN DIRECTORY OF PM COURSES

METHOD: Basic instructional format used in the training:

Lecture.. One-way communication, teacher to students.

Seminar.. Two-way communication and class discussion.

Workshop. Application of knowledge and skills taught.

Video.... Tape recorded and/or televised instruction.

MEDIUM: Specific instructional tools or vehicles included:

Case Study.... Examination and discussion of real cases.

Simulation.... Interactive performance of mock process.

Project..... Individual or group structured exercise.

LENGTH: Number of days, weeks, or months of instruction.

LOCALE: Geographical distribution of the course offerings:

Local.... Numerous particular places around the country.

Regional. A few convenient locations across the country.

Central.. One fixed location (major city or source home).

PLACES: Actual location(s) where the course is being offered.

OFFERS: Number of times per year the course is being offered.

SERIES: Training program, if any, that the course is part of.

SOURCE: Name, address, contact, telephone, of agency or firm.

PRICE: Basic tutition per class per person.

ABOUT: Text or synopsis of the course description that is provided by the agency or firm offering the class.

RATING: Average of all evaluations provided by Corps employees who have taken the course recently.

TABLE C-2: PM TRAINING COURSE NOMINATION/EVALUATION FORM--SIDE 1

GENERAL INSTRUCTIONS: Duplicate this blank form and use the copy to nominate or evaluate PM training courses that you have taken within the last three years. Please complete a separate copy of the form for each course.

SIDE-1: Please provide the information requested below. Thanks!

YOUR FULL NAME _____

POSITION TITLE _____

OFFICE SYMBOL _____

STREET OR BOX _____

CITY, STATE, ZIP _____

TELEPHONE NUMBER _____

Please check one of the following:

☐ I am NOMINATING a training course not in the current Directory.

☐ I am EVALUATING a training course now in the current Directory.

NAME OF COURSE _____

DATE OF COURSE _____

SITE OF COURSE _____

If you are EVALUATING a course, please copy the Directory entry, circle the rating you wish to give the course (at the bottom of the entry), edit any or all of the data in the entry to reflect your particular facts or views, and attach the marked up entry to this form.

If you are NOMINATING a course, please attach a photocopy of the course information provided by the vendor or agency (if it is available), and complete Side-2 of this form. Remember, if the course is in the current Directory, please follow the instructions for evaluating courses.

Please mail the completed form and attachments to:

The Institute for Water Resources
ATTN: CEWRC-IWR-A (PM Directory)
7701 Telegraph Road, Casey Bldg.
Alexandria, Virginia 22315-3868

Thanks for your help in keeping the Directory up to date. If you have any questions or comments, please call IWR at 703/355-2219 and ask for a member of the Directory Team.

[continued on Side 2]

TABLE C-2: PM TRAINING COURSE NOMINATION/EVALUATION FORM--SIDE 2

SIDE-2: Please use the items below to describe and evaluate the course you listed for NOMINATION on Side-1. If you are attaching information about the course and the vendor, you will not need to complete all of the items (unless you wish to). In any event, please EVALUATE the course by circling one of the ratings. Please provide, in attached information or by completing the item, at least the underlined items. Circle the appropriate answer(s) or clearly write in the answer. The terms used below are defined in Table C-1 of this Handbook. Thanks!

TITLE: _____

LEVEL: Introduction Preparation Enhancement

SCOPE: Survey Process Focus

REALM: Generic Civil Works Military HTRW/Environ

PREREQUISITE(S): _____

TOPIC: People/Relational Process/Informational

TASKS: Lead Plan Organize Monitor Control

PMBOK: Scope Cost Time Human Resource

(PMI) Quality Risk Contract Communication

TOOLS: _____

METHOD: Lecture Seminar Workshop Video Other

MEDIUM: Cases Simulation (Computer) Project Other

LENGTH: _____ days

LOCALE: Local Regional Central

PLACES: _____

OFFERS: _____ times per year

SERIES: ☐ part of a program, or ☐ not part of a program

SOURCE: _____

_____

_____

POC: _____( )_____-_____

PRICE: $ _____ per student

DESCRIPTION: *Attach separate sheet if necessary.* _____

_____

_____

_____

_____

_____

_____

EVALUATION: Excellent Good Average Fair Poor

APPENDIX

A copy of the current ACTEDS plan for Engineers and Scientists (Resources and Construction) Career Program (CP-18) is included as a separate appendix for ready reference. This document will be revised probably in Fiscal 1996 to be consistent with the Army policy and procedures package (AR 690-950 and DA PAM 690-950) now being revised. This revision of the ACTEDS plan is not expected to change the guidance contained in the career ladders and the career development and master training plans for PPM and the other ESRC functions.

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This handbook indroduces Army career management policies and procedures, and the ACTEDS plan for Army Engineers and Scientists (Resources and Construction), and contains the newly approved career ladder and career development and master training plans for the programs and project management function of the ESRC career program. The handbook also contains an informal training guide for the aspir - ing and practicing project managers in the Corps, and provide basic instructions for using the compaion "Directory of Project Management Courses" (IWR Report 96-R-3).

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