

FY 05 CALENDAR (OCTOBER 2004 - SEPTEMBER 2005)

ENGINEERING & SCIENCES	COST	COURSE DATES AND COURSE CODES											
		OCT 04	NOV 04	DEC 04	JAN 05	FEB 05	MAR 05	APR 05	MAY 05	JUN 05	JUL 05	AUG 05	SEP 05
Acoustics, Basic	\$500		15-16										
Airborne Systems Test and Evaluation (TPS)	\$2000		29 Nov –10 Dec										
Airplane Flying Qualities Intro (TPS)	\$2027	18-29											
Airworthiness	\$175			15			16			15			14
Antenna Fundamentals	\$837									28-29			
Applied Statistics for Engineers	\$500		17-18								18-19		
Class Desk & APML Orientation	None			06-09			28-31				25-28		
Crewstation Analysis (TPS)	\$1000												
Electromagnetic Interference and Compatibility (EMI/EMC)	\$993						28-30						
ESDP Familiarization Tour	None		17-18			15-16		13-14			20-21		
ESDP Fundamentals of Contracting & Classification MGMT for Tech Personnel	None			14						14			
ESDP Naval Aviation Mission Seminar	None				25-26							16-17	
Flight Test, Intro. (TPS)	\$2000												
Fundamentals of Radar	\$993							11-13					
GPS Technology	\$993					07-09							

ENGINEERING & SCIENCES	COST	COURSE DATES AND COURSE CODES											
		OCT 04	NOV 04	DEC 04	JAN 05	FEB 05	MAR 05	APR 05	MAY 05	JUN 05	JUL 05	AUG 05	SEP 05
Infrared Imaging Systems	\$993						01-03						
Intellectual Property and Tech Transfer	None	27		15		23		20		29		31	
Lightning Protection of Aircraft	\$1675						21-25						
Lightning Protection of Avionics	\$1675										18-22		
Microwave/RF Hazards	\$433									07			
MIL-STD 1553 Multiplex Bus	\$950				25-27							09-11	
Systems Engineering, Fundamentals	\$1050						21-25					08-12	
Systems Engineering Technical Review (SETR) Process	None	20		15		16		13		15		17	
Underwater Acoustics I & Passive Sonar	\$500			01-02									
Underwater Acoustics II & Active Sonar	\$500			13-14									
Underwater Acoustics III & Sonobuoy Systems	\$500			15-16									
UAV Flight Test Intro (TPS)	\$1800												

PLEASE NOTE: PAX River Managers/Supervisors – If you need a specific type of training for your competency and you have funding, please contact the E & S Program Coordinator at (301) 757-4122. I will work with you to bring the course on-site to fit your training needs.

COURSE TITLE:	ACOUSTICS, BASIC	
VENDOR:	Alan D. Stuart P.O. Box 393 Lemont, PA 16851	
LOCATION:	Employee Development Center, B2189 (PAX River)	
	DATES: 15-16 NOV 04	NOMINATION DEADLINES: 15 OCT 04
TIME:	0800-1600 (16 hours)	
DESCRIPTION:	<p>Course focuses on understanding the fundamental concepts and techniques of air-borne sound, as well as audio engineering and noise control engineering. Topics include: Sound waves in solids and fluids including plane and spherical waves; speech and hearing; acoustic sensors and sources including microphones and loudspeakers; decibels (dB) scales; sound level meters and sound measurements; sound reflection, transmission, and refraction including Snell's Law and coincident effect; directivity of sources and receivers; acoustics filters including Helmholtz resonators and mufflers; outdoor sound propagation; flow noise considerations; measurement techniques including narrow-band and octave-band analysis; topics of interest to the class.</p> <p>Materials: Each student receives a copy of the instructor's course notes</p>	
OBJECTIVE:	<p>The objective of this course is to provide an <i>introductory overview</i> of basic acoustics as related to a variety of applications. Emphasis is placed on illustrating phenomena and principles through demonstrations and examples from common experience. Topics are presented with a minimum of mathematics.</p>	
NOMINATIONS:	<p>NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development</p> <p>NOTE: Contractor personnel may attend on a space-available basis. Nominations must be made by letter addressed to the Program Coordinator. Once the nominee receives a confirmation of acceptance, a check made payable to the vendor must be sent directly to the Program Coordinator at the Employee Development Center prior to the first day of class.</p>	
COST:	\$500	
METHOD OF PAYMENT:	Vendor accepts GCPC (Government-wide Commercial Purchase Card).	
POC:	(301) 757-4122	

COURSE TITLE:	AIRBORNE SYSTEMS TEST AND EVALUATION	
VENDOR:	United States Naval Test Pilot School	
LOCATION:	USN Test Pilot School, B2168 (PAX River)	
	DATE: 29 NOV – 10 DEC 04	NOMINATION DEADLINE: 29 OCT 04
TIME:	0800-1630	
DESCRIPTION:	<p>Topics include:</p> <ul style="list-style-type: none"> ❖ Review of Report Writing ❖ Review of the Research and Evaluation Paragraph ❖ Airborne Systems Basics and Flight Test Techniques <ul style="list-style-type: none"> ❖ Radar Theory ❖ Electro-Optical Theory ❖ Navigation System Theory ❖ Software Test and Evaluation ❖ Integrated Systems Testing <ul style="list-style-type: none"> ❖ Test Design ❖ Safety and Technical Review ❖ Flying the Test <ul style="list-style-type: none"> ❖ Each student will conduct a radar, navigation and electro-optical integrated systems flight on the Airborne Systems Test and Research Support Airplane (ASTARS). ❖ Analysis of Results ❖ Data Presentation 	
OBJECTIVE:	<p>At the completion of this course, participants will:</p> <ul style="list-style-type: none"> ❖ Understand the theory of radar, navigation, and electro-optical systems individually and as part of an integrated system. ❖ Design and execute an integrated systems test plan. ❖ Report on test results both orally and several written formats. 	
AUDIENCE:	Engineers and scientists involved in the test and evaluation of airborne systems.	
NOMINATIONS:	<p>NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development NOTE: NAVAIR TEAM employees must also contact the USNTPS to register. All external employees should contact the USNTPS directly to register and for payment instructions.</p>	
COST:	\$2000 (includes flight time)	
METHOD OF PAYMENT:	Internal Activity Allocation	
For more info., please contact the Short Course Department at the U.S. Naval TPS (301) 757-2137		
POC:	(301) 757-4122	

COURSE TITLE:	AIRPLANE FLYING QUALITIES - INTRO	
VENDOR:	United States Naval Test Pilot School	
LOCATION:	USN Test Pilot School, B2168 (PAX River)	
	DATE: 18-29 OCT 04	NOMINATION DEADLINE: 18 SEP 04
TIME:	Morning class, flights and labs throughout the day	
DESCRIPTION:	<p><u>Week One:</u> Aerodynamics Summary Longitudinal Statics Non-Maneuvering Flight Characteristics Maneuvering Flight Characteristics Flight Controls Aerodynamic Non-linearity Lateral Directional Statics Simulation Exercises 1 Static longitudinal, non-maneuvering and maneuvering Static lateral-directional Longitudinal Dynamics Longitudinal Dynamic Modes Longitudinal Transfer Modes Lateral-Directional Dynamic Modes Lateral-Directional Transfer Functions</p> <p><u>Week Two:</u> Longitudinal Handling Qualities/Testing Lateral-directional Handling Qualities/Testing Simulation Exercises 2 Longitudinal dynamic modes Lateral-directional dynamic modes Pilot Handling Qualities Evaluation Process Military Specifications and Standards Advanced Flight Control Systems</p> <p>*This course includes two demonstration flights.</p>	
AUDIENCE:	Engineers and scientists involved in the test and evaluation of flight control systems.	
NOMINATIONS:	NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development NOTE: NAVAIR TEAM employees must also contact the USNTPS to register. All external employees should contact the USNTPS directly to register and for payment instructions.	
COST:	\$2027 (including two flights) Please contact USNTPS at the number below for information.	
METHOD OF PAYMENT:	Internal Activity Allocation	
For more info., please contact the Short Course Department at the U.S. Naval TPS (301) 757-2137		
POC:	(301) 757-4122	

COURSE TITLE:	AIRWORTHINESS	
VENDOR:	Airworthiness/Flight Clearance AIR – 4.0P Patuxent River, MD 20670	
LOCATION:	Employee Development Center, B2189 (PAX River, MD)	
	DATE: 15 DEC 04 16 MAR 05 15 JUN 05 14 SEP 05	NOMINATION DEADLINE: 15 NOV 04 16 FEB 05 15 MAY 05 14 AUG 05
TIME:	0800-1530 (8 Hours)	
DESCRIPTION:	This course provides NAVAIR and NAVAIR Contract Support personnel a working knowledge and a comprehensive understanding of the NAVAIR Airworthiness process. The course will define the three types of flight clearances and what an IFC, NATOPS or NATIP can authorize. This course will also explain the Naval Instructions that governs the Flight Clearance process: NAVAIRINST 13034.1B, 13034.2 and OPNAVINST 3510.15 and 3710.7	
OBJECTIVE:	At the completion of this course the participants should be able to: <ul style="list-style-type: none"> ❖ Understand NAVAIR policy and procedures pertaining to Airworthiness. ❖ Know what flight clearances are, when you need one, how to get one, and how to execute the process efficiently. ❖ Know the content of the NATIP and NATOPS and how they relate to interim flight clearances. ❖ Be familiar with the NATIP and NATOPS updates and change processes. 	
AUDIENCE:	System Engineers, IPT leads, Class Desks, Facilitators, Flight Clearance Performance Monitors, Flight Test Engineers and members of the NAVAIR RDT&E community.	
NOMINATIONS:	NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development NOTE: Contractor personnel may attend on a space-available basis. Nominations must be made by letter addressed to the Program Coordinator. Once the nominee receives a confirmation of acceptance, a check made payable to the vendor must be sent directly to the Program Coordinator at the Employee Development Center prior to the first day of class.	
COST:	\$175	
METHOD OF PAYMENT:	Internal Activity Allocation	
POC:	(301) 757-4122	

COURSE TITLE:	Antenna Fundamentals	
VENDOR:	Applied Technology Institute 12960 Linden Church Rd. Clarksville, MD 21029	
LOCATION:	Employee Development Center, B2189 (PAX River, MD)	
	DATE: 28-29 JUN 05	NOMINATION DEADLINE: 28 MAY 05
TIME:	0800-1530 (16 hours)	
DESCRIPTION:	<p>This two-day course teaches the basics of antenna and antenna array theory. Fundamental concepts such as beam patterns, radiation resistance, polarization, gain/directivity, aperture size, reciprocity, and matching techniques are presented. Different types of antennas such as dipole, loop, patch, horn, dish, and helical antennas are discussed and compared and contrasted from a performance/applications standpoint. The locations of the reactive near-field, radiating near-field (Fresnel region), and far-field (Fraunhofer region) are described and the Friis transmission formula is presented with worked examples. Propagation effects are presented. Antenna arrays are discussed, and array factors for different types of distributions (e.g., uniform, binomial, and Tschebyscheff arrays) are analyzed giving insight to sidelobe levels, null locations, and beam broadening (as the array scans from broadside.) The end-fire condition is discussed. Beam steering is described using phase shifters and true-time delay devices. Problems such as grating lobes, beam squint, quantization errors, and scan blindness are presented. Antenna systems (transmit/receive) with active amplifiers are introduced. Finally, measurement techniques commonly used in anechoic chambers are outlined. This course is invaluable to engineers seeking to work with experts in the field and for those desiring a deeper understanding of antenna concepts.</p>	
OBJECTIVE:	<p>You will learn:</p> <ul style="list-style-type: none"> -Basic antenna concepts that pertain to all antennas and antenna arrays. -The appropriate antenna for your application. -Factors that affect antenna array designs and antenna systems. -Measurement techniques commonly used in anechoic chambers. <p>Upon completion of this course, you will have a solid understanding of the appropriate antenna for your application and the technical difficulties you can expect to encounter as your design is brought from the conceptual stage to a working prototype.</p>	
AUDIENCE:	Engineers, managers, and other interested technical personnel.	
NOMINATIONS:	<p>NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development</p> <p>NOTE: Contractor personnel may attend on a space-available basis. Nominations must be made by letter addressed to the Program Coordinator. Once the nominee receives a confirmation of acceptance, a check made payable to the vendor must be sent directly to the Program Coordinator at the Employee Development Center prior to the first day of class.</p>	
LENGTH:	2 Days	
COST:	\$837	
METHOD OF PAYMENT:	Vendor accepts GCPC (Government-wide Commercial Purchase Card).	
POC:	(301) 757-4122	

COURSE TITLE:	APPLIED STATISTICS FOR ENGINEERS	
VENDOR:	Alan D. Stuart P.O. Box 393 Lemont, PA 16851	
LOCATION:	Employee Development Center, B2189 (PAX River)	
	DATES: 17-18 NOV 04 18-19 JUL 05	NOMINATION DEADLINES: 17 OCT 04 18 JUN 05
TIME:	0800-1600 (16 hours)	
DESCRIPTION:	<p>Concepts introduced include: mean, variance, and standard deviation; probability density, and cumulative distributions; sampling and decision theory; confidence levels and intervals; percentiles and probability plots; linear regression analysis; Venn diagrams; and combinational and conditional probabilities, etc. Engineering applications include: design-of-experiments, signal processing, manufacturing tolerances, structural fatigue, system reliability; topics of interest to the class.</p> <p>Materials: Each student receives a copy of the instructor's course notes and a self-study text containing examples and worked-out problems.</p>	
OBJECTIVE:	The objective of this course is to provide a basic <i>introductory overview</i> of statistics and probability. Students should complete the course with a basic understanding of statistical applications and how they relate to engineering.	
AUDIENCE:	This course is intended for engineers and technicians with a desire to learn about statistics and probability, or who need a refresher.	
NOMINATIONS:	<p>NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development</p> <p>NOTE: Contractor personnel may attend on a space-available basis. Nominations must be made by letter addressed to the Program Coordinator. Once the nominee receives a confirmation of acceptance, a check made payable to the vendor must be sent directly to the Program Coordinator at the Employee Development Center prior to the first day of class.</p>	
COST:	\$500	
METHOD OF PAYMENT:	Vendor accepts GCPC (Government-wide Commercial Purchase Card).	
POC:	(301) 757-4122	

COURSE TITLE:	CLASS DESK – APML ORIENTATION	
VENDOR:	Air 4.1 Naval Air Systems Command Patuxent River, Maryland 20670	
LOCATION:	Employee Development Center, B2189 (PAX River, MD)	
	DATE: 06-09 DEC 04 28-31 MAR 05 25-28 JUL 05	NOMINATION DEADLINE: 06 NOV 04 28 FEB 05 25 JUN 05
TIME:	0800-1530 (32 Hours)	
DESCRIPTION:	This four-day course provides a description of the roles and responsibilities for personnel assigned as Assistant Program Manager for Systems Engineering (Class Desk) or Assistant Program Manager for Logistics (APML) within a competency aligned organization, and the role of systems engineering and logistics in acquisition. Additional modules covering associated processes are presented including team capabilities, new acquisition model, systems engineering, logistics support, technical reviews, reliability and maintainability, engineering investigations and hazard material reports, grounding bulletins and red stripes, technical directives and bulletins, system safety & risk assessment, business and finance, software, design interface/maintenance planning, configuration management, initial operational capability supportability review (IOCSR), cost analysis, total ownership cost, earned value management, airworthiness, and test and evaluation.	
OBJECTIVE:	To provide basic skills and knowledge to enhance the performance of personnel newly assigned as assistant program manager for systems engineering (Class Desk) or assistant program manager for logistics.	
AUDIENCE:	Personnel newly assigned as class desks or APML's and supporting government and contract personnel. Other employees are welcome subject to space availability.	
PREREQUISITE:	None	
LENGTH:	4 Days	
NOMINATIONS:	<p>NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development</p> <p>NOTE: Contractor personnel may attend on a space-available basis. Nominations must be made by letter addressed to the Program Coordinator. Once the nominee receives a confirmation of acceptance, a check made payable to the vendor must be sent directly to the Program Coordinator at the Employee Development Center prior to the first day of class.</p>	
COST:	None	
POC:	(301) 757-4122	

COURSE TITLE:	CREWSTATION ANALYSIS	
VENDOR:	United States Naval Test Pilot School	
LOCATION:	USN Test Pilot School, B2168 (PAX River, MD)	
	DATE: TBD	NOMINATION DEADLINE:
TIME:	0800-1630	
DESCRIPTION:	<p>Topics include:</p> <ul style="list-style-type: none"> ❖ Introductory Concepts (Systems Engineering) ❖ Anthropometry ❖ Static Analysis Techniques ❖ Sensory Perception ❖ Information Processing ❖ Applications to Displays and Controls ❖ Mental Workload Measures ❖ Psychomotor Work ❖ Task Analysis ❖ Decision-making ❖ Operator Interfaces ❖ Human Performance in Extreme Environments ❖ Dynamic Crewstation Analysis Techniques <p>Two 3-hour practical exercises on USNTPS simulators/aircraft are incorporated to reinforce the classroom lectures.</p>	
OBJECTIVE:	At the completion of this course, participants will have a fundamental understanding of basic human factors considerations in order to enable safe and effective planning, direction, and execution of assessments of aircraft crewstations.	
AUDIENCE:	Engineers and scientists involved in the test and evaluation of aircraft crewstations.	
NOMINATIONS:	<p>NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development</p> <p>NOTE: Contractor personnel may attend on a space-available basis. Nominations must be made by letter addressed to the Program Coordinator. Once the nominee receives a confirmation of acceptance, a check made payable to the vendor must be sent directly to the Program Coordinator at the Employee Development Center prior to the first day of class.</p>	
COST:	\$1000	
METHOD OF PAYMENT:	Internal Activity Allocation	
For more info., please contact the Short Course Department at the U.S. Naval TPS (301) 757-2137		
POC:	(301) 757-4122	

COURSE TITLE:	EMI/EMC	
VENDOR:	Applied Technology Institute 12960 Linden Church Rd. Clarksville, MD 21029	
LOCATION:	Employee Development Center, B2189 (PAX River, MD)	
	DATE: 28-30 MAR 05	NOMINATION DEADLINE: 28 FEB 05
TIME:	0800-1530 (24 hours)	
DESCRIPTION:	<p>This three-day course is designed for anyone who needs an understanding of Electromagnetic Compatibility (EMC) methodology and concepts. Historically, Radio Frequency Interference (RFI) was first identified as a problem as early as 1925. The growth of the electronics industry, with an attendant growth in systems complexity, led to the expansion of RFI to Electromagnetic Interference (EMI). EMC is the capability for multiple, diverse systems to operate in close proximity without causing or being subject to interference. The course offers a basic working knowledge of the principles of the EMC theory. This course will provide the ability to understand and communicate with communications-electronics (C-E) engineers and project personnel relating to EMC. The instructor has written more than 40 technical papers and four books on EMC.</p>	
OBJECTIVE:	<p>You will learn about:</p> <ul style="list-style-type: none"> • Examples of Communications Systems EMI. • Quantification of Systems EMI. • Equipment and System EMI Concepts. • Source and Victim Coupling Modes. • Importance of Grounding. • Shielding Designs. • EMI Diagnostics. • EMC/EMI Specifications and Standards. 	
AUDIENCE:	Engineers, technicians, operators, managers, and other interested technical personnel.	
NOMINATIONS:	<p>NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development</p> <p>NOTE: Contractor personnel may attend on a space-available basis. Nominations must be made by letter addressed to the Program Coordinator. Once the nominee receives a confirmation of acceptance, a check made payable to the vendor must be sent directly to the Program Coordinator at the Employee Development Center prior to the first day of class.</p>	
LENGTH:	3 Days	
COST:	\$993	
METHOD OF PAYMENT:	Vendor accepts GCPC (Government-wide Commercial Purchase Card).	
POC:	(301) 757-4122	

COURSE TITLE:	ESDP FAMILIARIZATION TOUR	
VENDOR:	4.0 & 5.0 NAVAIR Patuxent River, MD 20670	
LOCATION:	Employee Development Center, B2189 (PAX River, MD)	
	DATE: 17-18 NOV 04 15-16 FEB 05 13-14 APR 05 20-21 JUL 05	NOMINATION DEADLINE: 17 OCT 04 15 JAN 05 13 MAR 05 20 JUN 05
TIME:	0800-1600 (Day 1) & 0800-1200 (Day 2)	
DESCRIPTION:	This course is designed to provide the entry-level engineer/ scientist with a broad overview of facilities and tenants at NAVAIR Patuxent River. A description of the Competency Aligned Organization and the IPT team concept will precede a tour that may include (based on availability): CTR/Telemetry, Anechoic Chamber, Steam Catapult, Test Pilot School, the Hazelrigg Hangar, St. Inigoes and more. This overview will enable the new professional to gain a better understanding of how their work supports the mission of NAVAIR.	
OBJECTIVE:	At the conclusion of this course, participants should be able to: <ul style="list-style-type: none"> ❖ Describe NAVAIR operation and organization. ❖ Describe the purpose, and identify the location of all the technical competencies. ❖ Identify professional personnel and areas of responsibility across NAVAIR. 	
AUDIENCE:	This course is designed for entry-level scientists and engineers. Other employees are welcome to attend based on space availability.	
PREREQUISITE:	None	
LENGTH:	1 ½ Days (12 Hours)	
NOMINATIONS:	NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development	
COST:	None	
POC:	(301) 757-4122	

COURSE TITLE:	ESDP FUNDAMENTALS OF CONTRACTING AND CLASSIFICATION MANAGEMENT FOR TECHNICAL PERSONNEL	
VENDOR:	4.0 & 5.0 NAVAIR Patuxent River, Maryland 20670	
LOCATION:	Employee Development Center, B2189 (PAX River, MD)	
	DATE: 14 DEC 04 14 JUN 05	NOMINATION DEADLINE: 14 NOV 04 14 MAY 05
TIME:	0800-1200	
DESCRIPTION:	This course is designed for new project engineer team members who may use the acquisition process in the performance of their job. It also covers the responsibilities of the professional to ensure protection of classified material. Topics covered include: an overview of the acquisition process and various acquisition methods available, public policies which impact the acquisition process, the application of classification management principles, and recognition of security violations/compromises.	
OBJECTIVE:	At the conclusion of this course, participants should be able to: <ul style="list-style-type: none"> ❖ Describe the acquisition process including time constraints, paperwork required, approval levels and procurement authority. ❖ Differentiate between acquisition methods. ❖ Define proper contractor/civil service relations. ❖ Possess a working knowledge of their security duties and responsibilities. ❖ Be familiar with OPNAVINST 5510.1 and NAVAIRWARCENACDIV 55101.1. 	
AUDIENCE:	This course is designed for entry-level scientists and engineers. Other employees are welcome to attend based on space availability.	
PREREQUISITE:	None	
LENGTH:	1/2 Day (4 Hours)	
NOMINATIONS:	NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development	
COST:	None	
POC:	(301) 757-4122	

COURSE TITLE:	ESDP NAVAL AVIATION MISSION SEMINAR	
VENDOR:	4.0 & 5.0 NAVAIR Patuxent River, Maryland 20670	
LOCATION:	Employee Development Center, B2189 (PAX River, MD)	
	DATE: 25-26 JAN 05 16-17 AUG 05	NOMINATION DEADLINE: 25 DEC 04 16 JUL 05
TIME:	0800-1600 (Day 1) & 0800-1200 (Day 2)	
DESCRIPTION:	This course addresses Naval Aviation Missions. Experienced aviators and expert technical specialists from NAVAIR, Patuxent River explain what, when, and how their platform is used to do the Navy's job.	
OBJECTIVE:	At the completion of the course, participants should be able to describe the following missions: <ul style="list-style-type: none"> ❖ U.S. Naval Aviation ❖ Foreign Military Threat ❖ Carrier Operations ❖ Electronic Warfare ❖ Anti-Submarine Warfare ❖ Air-to-Ground Warfare ❖ Air-to-Air Warfare ❖ Air-to-Surface Warfare ❖ Special Warfare Support 	
AUDIENCE:	This is an unclassified course designed for entry-level engineers and scientists at the GS-05 to GS-12 level. Other employees are welcome to attend based on space availability.	
PREREQUISITE:	None	
LENGTH:	1 ½ Days (12 Hours)	
NOMINATIONS:	NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development	
COST:	None	
POC:	(301) 757-4122	

COURSE TITLE:	FLIGHT TEST - INTRO	
VENDOR:	United States Naval Test Pilot School	
LOCATION:	USN Test Pilot School, B 2168 (PAX River, MD)	
COURSE CODE:	DATE: TBD	NOMINATION DEADLINE:
TIME:	0800-1630	
DESCRIPTION:	<p>Topics to be covered during the course include:</p> <ul style="list-style-type: none"> ❖ The Acquisition Process ❖ The Test Planning Process ❖ Report Writing <ul style="list-style-type: none"> The Research and Evaluation Paragraph Types of Reports ❖ The DT-OT Transition Report ❖ Flight Clearances ❖ Data Collection and Instrumentation ❖ Airborne Systems Basics and Flight Test Techniques ❖ Introduction to Fixed and Rotary-wing Testing ❖ Test Planning an Inertial Navigation System Evaluation <ul style="list-style-type: none"> Flight Briefing Test Design Data Collection Safety and Technical Review ❖ Flying the Test ❖ Analysis of Results ❖ Data Presentation ❖ Naval Air Systems Command Ranges and Facilities <p>This course includes a navigation evaluation flight in the USNTPS Airborne Systems Test and Research Support aircraft. Medical screening will be conducted during the first week of the course. For individuals with questions concerning this process, please contact the USNTPS Short Course Staff at the number below.</p>	
AUDIENCE:	The intended audience for this course is personnel involved in rotary-wing, fixed-wing or systems flight-testing. This course is intended to provide the working level engineer with the information necessary to plan, brief, conduct, debrief and analyze flight test results.	
NOMINATIONS:	<p>NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development</p> <p>NOTE: NAVAIR TEAM employees must also contact the USNTPS to register. All external employees should contact the USNTPS directly to register and for payment instructions.</p>	
COST:	\$2000 Includes course tuition and the ASTARS navigation evaluation flight.	
METHOD OF PAYMENT:	Internal Activity Allocation	
For more info., please contact the Short Course Department at the U.S. Naval TPS (301) 757-2137		
POC:	(301) 757-4122	

COURSE TITLE:	Fundamentals of Radar	
VENDOR:	Applied Technology Institute 12960 Linden Church Rd. Clarksville, MD 21029	
LOCATION:	Employee Development Center, B2189 (PAX River, MD)	
	DATE: 11-13 APR 05	NOMINATION DEADLINE: 11 MAR 05
TIME:	0800-1530 (24 hours)	
DESCRIPTION:	This fast-moving three-day course is designed for those who need an understanding of the basics of advanced radar technology. The principles of the various radar systems are presented and the system design tradeoffs are discussed in the context of different mission requirements. This course will provide the ability to understand and communicate with radar engineers and project personnel. This course has also been designed as an introductory course for higher level and specialized radar topics. The instructor has worked on radar programs and projects for the Navy, Army, Air Force, FAA, NASA and DARPA.	
OBJECTIVE:	You will learn: <ul style="list-style-type: none"> • Basic math and physics underlying radar technology • The fundamental concepts of the various radar systems • The working language of the radar community • The major tradeoffs in radar system performance 	
AUDIENCE:	Engineers, managers, and other interested technical personnel.	
NOMINATIONS:	NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development NOTE: Contractor personnel may attend on a space-available basis. Nominations must be made by letter addressed to the Program Coordinator. Once the nominee receives a confirmation of acceptance, a check made payable to the vendor must be sent directly to the Program Coordinator at the Employee Development Center prior to the first day of class.	
LENGTH:	3 Days	
COST:	\$993	
METHOD OF PAYMENT:	Vendor accepts GCPC (Government-wide Commercial Purchase Card).	
POC:	(301) 757-4122	

COURSE TITLE:	GPS Technology	
VENDOR:	Applied Technology Institute 12960 Linden Church Rd. Clarksville, MD 21029	
LOCATION:	Employee Development Center, B2189 (PAX River, MD)	
	DATE: 07-09 FEB 05	NOMINATION DEADLINE: 07 JAN 05
TIME:	0800-1530 (24 hours)	
DESCRIPTION:	Nearly every satellite that flies into space uses the GPS to fix its position. In this popular & comprehensive 3-day short course, GPS expert Tom Logsdon will describe in detail how those precise spaceborne radio navigation systems work and review the many practical benefits they provide to users in space and around the globe.	
OBJECTIVE:	<p>Understand and apply the following:</p> <ol style="list-style-type: none"> 1. Radio navigation Principles and the Three Major Segments of the GPS. 2. Navigation Solutions and Kalman Filtering Techniques. 3. Designing an Effective GPS Receiver. 4. Military Applications for GPS. 5. Integrated Navigation Systems. 6. Differential Navigation and Pseudo satellites. 7. Carrier-Aided Solutions. 8. The Navstar Satellites. 9. Russia's Glonass Constellation. 10. Precise Time Synchronization. 11. Digital Avionics and Air Traffic Control. 12. Using the GPS for Satellite Orbit Determination. <p>Through practical demonstration, you will learn how a GPS receiver works, how to operate it in various situations, and how to interpret the positioning solutions it provides.</p>	
AUDIENCE:	Engineers, managers, and other interested technical personnel.	
NOMINATIONS:	<p>NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development</p> <p>NOTE: Contractor personnel may attend on a space-available basis. Nominations must be made by letter addressed to the Program Coordinator. Once the nominee receives a confirmation of acceptance, a check made payable to the vendor must be sent directly to the Program Coordinator at the Employee Development Center prior to the first day of class.</p>	
LENGTH:	3 Days	
COST:	\$993	
METHOD OF PAYMENT:	Vendor accepts GCPC (Government-wide Commercial Purchase Card).	
POC:	(301) 757-4122	

COURSE TITLE:	Infrared Imaging Systems	
VENDOR:	Applied Technology Institute 12960 Linden Church Rd. Clarksville, MD 21029	
LOCATION:	Employee Development Center, B2189 (PAX River, MD)	
	DATE: 01-03 MAR 05	NOMINATION DEADLINE: 01 FEB 05
TIME:	0800-1530 (24 hours)	
DESCRIPTION:	This is a comprehensive 3-day course designed for those who wish to enhance their understanding of infrared (IR) technology, and improve their skills in designing IR sensing system, or advocating for IR technology development. The practical aspect of modern IR physics and design principles are given in simple terms. Different IR materials, detectors and focal plane arrays (FPAs) will be presented with comparisons of the strong and weak points of each material for different applications. IR for space applications will be emphasized. Examples of IR sensors for ballistic missile defense kill vehicles and surveillance systems will be given. Some knowledge of semiconductor electronics will be helpful, but not required.	
OBJECTIVE:	<ul style="list-style-type: none"> • Why is IR so important to space and missile defense and what is the latest? • How IR detectors work, and simple design rules. • How to compare different IR sensors and decide which one to use. • How space IR sensors are different from terrestrial IR sensors. • What IR sensors are being used in current missile defense systems. • What IR sensors are expected for future missile defense system upgrades. 	
AUDIENCE:	Engineers, managers, and other interested technical personnel.	
NOMINATIONS:	<p>NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development</p> <p>NOTE: Contractor personnel may attend on a space-available basis. Nominations must be made by letter addressed to the Program Coordinator. Once the nominee receives a confirmation of acceptance, a check made payable to the vendor must be sent directly to the Program Coordinator at the Employee Development Center prior to the first day of class.</p>	
LENGTH:	3 Days	
COST:	\$993	
METHOD OF PAYMENT:	Vendor accepts GCPC (Government-wide Commercial Purchase Card).	
POC:	(301) 757-4122	

COURSE TITLE:	INTELLECTUAL PROPERTY AND TECHNOLOGY TRANSFER	
VENDOR:	Office of Counsel & Office of Research and Tech. Applications Naval Air Warfare Center Aircraft Division Patuxent River, MD 20670	
LOCATION:	Employee Development Center, B2189 (PAX River, MD)	
	DATE: 27 OCT 04 15 DEC 04 23 FEB 05 20 APR 05 29 JUN 05 31 AUG 05	NOMINATION DEADLINE: 27 SEP 04 15 NOV 04 23 JAN 05 20 MAR 05 29 MAY 05 31 JUL 05
TIME:	0800-1530	
DESCRIPTION:	<p>Students will develop an understanding of technology transfer, the process in which technology or knowledge developed in one place or for one purpose is applied and exploited in another place for some other purpose. Within the DOD, this involves transfers occurring between federal laboratories and any nonfederal organization, including private industry, academia, and state and local governments, but can occur between federal agencies. A major long-term goal of the federal government is sustained economic growth; one way to achieve this is development and commercialization of new technologies. Federal labs try to foster and maintain advanced technical capabilities by partnering with private industry and academia.</p> <p>Students will learn about the specific mechanisms used for technology transfer, the legal issues associated with each, how an employee's innovation may be an invention that could be patented, and how and why intellectual property must be protected. They will also become acquainted with the NAWCAD Patuxent River Office of Research and Technology Applications (ORTA) and its role in implementing technology transfer at the command, and with the Office of Counsel and its responsibilities in protecting intellectual property.</p>	
OBJECTIVE:	<p>At the completion of the course, participants will understand:</p> <ul style="list-style-type: none"> ❖ Inventions and patents. ❖ Methods to accomplish technology transfer. ❖ Patent Licensing. ❖ Cooperative research and development agreement. ❖ Commercial service agreement. ❖ Memorandum of agreement. ❖ Command processes and offices involved in technology transfer. ❖ Major technology transfer legislation. 	
AUDIENCE:	RDT&E scientists and engineers	
NOMINATIONS:	<p>NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development</p> <p>NOTE: Contractor personnel are NOT eligible to attend.</p>	
COST:	None	
POC:	(301) 757-4122	

COURSE TITLE:	LIGHTNING PROTECTION OF AIRCRAFT	
VENDOR:	Lightning Technologies, Inc. 10 Downing Industrial Parkway Pittsfield, MA 01201	
LOCATION:	Employee Development Center, B2189 (PAX River)	
	DATES: 21-25 MAR 05	NOMINATION DEADLINES: 21 FEB 05
TIME:	0800-1600 (36 hours)	
DESCRIPTION:	This course will bring the student up-to-date with the fundamentals of lightning and static electrification effects on aircraft, current protection requirements, and acceptable and efficient protection design and verification methods. The student will gain the basic information and understanding required for meaningful work in this technology area, and be able to avoid common misinterpretation of the requirements, costly over-designs and other common pitfalls.	
OBJECTIVE:	<p>Natural Lightning: Cloud Formation and Electrification; Formation of the Cloud-to-Earth Lightning Flash; Intra-cloud Flashes; Other types of Lightning Flashes; Frequency of Occurrence; Electrical Characteristics of Lightning Flash Currents.</p> <p>Lightning Interaction with Aircraft/Helicopters: The Aircraft Lightning Attachment Process; Aircraft Initiated Lightning; Swept Leaders and Swept Stroke Locations; Zone Location Methods; Strike Attachment Scenarios; Implications of the Strike Attachment Process to Protection; Design and Testing; Statistics of Lightning Strike Encounters; Accidents, Incidents and Lessons Learned.</p> <p>Lightning Effects on Aircraft: Metallic Structures; Non-Metallic Structures; Fuel Systems; Propulsion Systems; Electrical/Electronic Systems; Other Systems; Personnel.</p> <p>Lightning Test Criteria and Standards: U.S. FAA and European JAA Lightning Protection Regulations; Advisory Circulars Pertaining to Lightning Protection.</p>	
AUDIENCE:	Technical personnel, engineers, designers and flight operations personnel concerned with design and certification of lightning protection for aerospace vehicles.	
PREREQUISITE:	Students should have some experience or familiarity with the design of airframes, propulsion systems, electrical and avionics systems, or other onboard systems or components. A degree in a related technical area is advisable but not required.	
NOMINATIONS:	<p>NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development</p> <p>NOTE: Contractor personnel may attend on a space-available basis. Nominations must be made by letter addressed to the Program Coordinator. Once the nominee receives a confirmation of acceptance, a check made payable to the vendor must be sent directly to the Program Coordinator at the Employee Development Center prior to the first day of class.</p>	
LENGTH:	4 ½ Days	
COST:	\$1675	
METHOD OF PAYMENT:	Vendor accepts GCPC (Government-wide Commercial Purchase Card).	
POC:	(301) 757-4122	

COURSE TITLE:	LIGHTNING PROTECTION OF AVIONICS	
VENDOR:	Lightning Technologies, Inc. 10 Downing Industrial Parkway Pittsfield, MA 01201	
LOCATION:	Employee Development Center, B2189 (PAX River)	
	DATES: 18-22 JUL 05	NOMINATION DEADLINES: 18 JUN 05
TIME:	0800-1600 (36 hours)	
DESCRIPTION:	This is an in-depth course for engineers concerned with lightning protection design and certification of aircraft avionics and other electrical systems. The course includes a detailed study of lightning indirect effects and coupling mechanisms, analysis and testing of transient levels, specific protection-design scenarios and techniques, and a thorough discussion of certification plans and verification-test methods and procedures. Emphasis is given to the protection of flight-critical and essential systems.	
OBJECTIVE:	<p>The course includes the following topics:</p> <ul style="list-style-type: none"> ❖ Role and Contents of Airworthiness Regulations ❖ Identification of Flight-Critical/Essential Systems ❖ Lightning Interaction w/Electrical and Avionics Systems ❖ Protection Design ❖ Treatment of Flight-Essential vs. Flight-Critical Functions ❖ Preparation of Certification Plans ❖ Equipment Transient Design Levels (ETDLs) and Transient Control Levels (TCLs) 	
AUDIENCE:	Engineers	
PREREQUISITE:	Students are required to have completed the course “Lightning Protection of Aircraft” or have prior approval of the lead instructor.	
NOMINATIONS:	<p>NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development</p> <p>NOTE: Contractor personnel may attend on a space-available basis. Nominations must be made by letter addressed to the Program Coordinator. Once the nominee receives a confirmation of acceptance, a check made payable to the vendor must be sent directly to the Program Coordinator at the Employee Development Center prior to the first day of class.</p>	
LENGTH:	4 ½ Days	
COST:	\$1675	
METHOD OF PAYMENT:	Vendor accepts GCPC (Government-wide Commercial Purchase Card).	
POC:	(301) 757-4122	

COURSE TITLE:	Microwave / RF Hazards	
VENDOR:	Applied Technology Institute 12960 Linden Church Rd. Clarksville, MD 21029	
LOCATION:	Employee Development Center, B2189 (PAX River, MD)	
	DATE: 07 JUN 05	NOMINATION DEADLINE: 07 MAY 05
TIME:	0800-1530 (8 hours)	
DESCRIPTION:	An excellent course to course to understand the overall hazards (legal, physical). The seminar covers FCC, NEPA and OSHA policies pertaining to RF sites. Emphasis of the seminar is possible health effects from overexposure to RF, hazard recognition, hazard avoidance, and hazard abatement techniques in connection with working at an RF site. Instructor uses real world examples and experience to bring these issues into focus with appropriate work practices for the student's understanding.	
OBJECTIVE:	You will learn about: MPE Overview / FCC Enforcement Non-Ionizing Basics Antenna 101 Basics US Standards and the Law Induced Current MPE Math Multi-Employer Workplace Tower Posting General Safety at RF Sites Safety Plans, RF Safety Signs Personal Monitors/PPE Steps to Compliance	
AUDIENCE:	Anyone responsible for compliance and all interested personnel.	
NOMINATIONS:	NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development NOTE: Contractor personnel may attend on a space-available basis. Nominations must be made by letter addressed to the Program Coordinator. Once the nominee receives a confirmation of acceptance, a check made payable to the vendor must be sent directly to the Program Coordinator at the Employee Development Center prior to the first day of class.	
LENGTH:	1 Day	
COST:	\$433	
METHOD OF PAYMENT:	Vendor accepts GCPC (Government-wide Commercial Purchase Card).	
POC:	(301) 757-4122	

COURSE TITLE:	MIL-STD-1553-MULTIPLEX BUS	
VENDOR:	Test Systems, Inc. 217 W Palmaire Phoenix, AZ 85021	
LOCATION:	Employee Development Center, B2189 (PAX River, MD)	
	DATE: 25-27 JAN 05 09-11 AUG 05	NOMINATION DEADLINE: 25 DEC 04 09 JUL 05
TIME:	0800-1600 (24 hours)	
DESCRIPTION:	The MIL-STD-1553 data bus is presently used in many advanced military programs and is also used to update systems in older programs. The applications are expanding rapidly requiring more trained engineers to deal with the technology. This 3-day seminar presents a thorough discussion of MIL-STD-1553 theory, application and testing. Two lab sessions illustrate the material being taught by providing students with "hands on" experience in identifying 1553 communication and trouble shooting remote terminal problems. Both experienced 1553 personnel and novices will find the seminar profitable.	
OBJECTIVE:	<p>By the end of the course, each participant will be able to:</p> <ul style="list-style-type: none"> ❖ State the definition of basic 1553 terms, data bus operation, date encoding, word sync, word forms, message formats, intermessage gap and response time. ❖ Understand MIL-STD-1553 Protocol including: Command. ❖ Word, Mode Codes, Mode Command Formats, Data ❖ Word Status Word, and Message Error Bit. ❖ Describe MIL-STD-1553 Hardware Characteristics. ❖ Describe System and Software Designs associated with ❖ MIL-STD-1553 data buses. ❖ Understand the philosophy of testing and phases of testing. ❖ State test requirements and test equipment requirements. 	
AUDIENCE:	Engineers, Technicians, System Designers and Managers who may be required to specify, design or test of systems employing the standard. Those attending should have a general knowledge of how digital busses work.	
NOMINATIONS:	<p>NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development</p> <p>NOTE: Contractors should contact the vendor directly to register.</p>	
COST:	\$950	
METHOD OF PAYMENT:	Vendor accepts GCPC (Government-wide Commercial Purchase Card).	
POC:	(301) 757-4122	

COURSE TITLE:	SYSTEMS ENGINEERING, FUNDAMENTALS	
VENDOR:	Johns Hopkins University Dorsey Center 6810 Deerpath Road, Suite 200 Elkridge, MD 21075	
LOCATION:	Employee Development Center, B2189 (PAX River, MD)	
	DATES: 21-25 MAR 05 08-12 AUG 05	NOMINATION DEADLINES: 21 FEB 05 08 JUL 05
TIME:	0800-1600 (40 hours)	
DESCRIPTION:	This course covers the application of systems engineering principles and methods to the management of engineering efforts in technical development programs, as well as the variation in responsibilities and techniques as a project moves from initial mission statement through engineering design to deployment. Topics include requirements analysis, interface definition and control, system trade and sensitivity studies, concept definition and assessment, system design and integration, system test and evaluation, and software system fundamentals from a systems engineering perspective. Special topics include modeling and simulations, quality teams, and engineering processes, which are discussed from a system viewpoint. Students are introduced to a knowledge base for the functional allocation and analysis of complex systems. Students address typical systems engineering problems that highlight important issues and methods of technical problem resolution.	
OBJECTIVE:	To approach and solve complex technical problems and acquisition systems by learning to "think like a systems engineer" -- develop a systems engineering viewpoint.	
AUDIENCE:	Students are expected to hold an engineering, science, or mathematics degree and have a minimum of two years professional experience. Significant technical experience can serve as a substitute for a non-technical degree.	
NOMINATIONS:	NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development NOTE: Contractor personnel may attend on a space-available basis. Nominations must be made by letter addressed to the Program Coordinator. Once the nominee receives a confirmation of acceptance, a check made payable to the vendor must be sent directly to the Program Coordinator at the Employee Development Center prior to the first day of class.	
COST:	\$1050	
METHOD OF PAYMENT:	Vendor accepts GCPC (Government-wide Commercial Purchase Card).	
POC:	(301) 757-4122	

COURSE TITLE:	SYSTEMS ENGINEERING TECHNICAL REVIEW (SETR) PROCESS	
VENDOR:	NAVAIR 4.1G Naval Air Systems Command Patuxent River, MD 20670	
LOCATION:	Employee Development Center, B2189 (PAX River, MD)	
	DATE: 20 OCT 04 15 DEC 04 16 FEB 05 13 APR 05 15 JUN 05 17 AUG 05	NOMINATION DEADLINE: 19 SEP 04 14 NOV 04 15 JAN 05 12 MAR 05 14 MAY 05 16 JUL 05
TIME:	0800-1530	
DESCRIPTION:	Using the SETR process in accordance with NAVAIR INST 4355.19B	
OBJECTIVE:	Students will learn how to implement the Systems Engineering Technical Review Process, and use the execution modules and risk assessment checklists that it contains.	
AUDIENCE:	The Systems Engineering Community	
NOMINATIONS:	<p>NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development</p> <p>NOTE: Contractor personnel may attend on a space-available basis. Nominations must be made by letter addressed to the Program Coordinator. Once the nominee receives a confirmation of acceptance, a check made payable to the vendor must be sent directly to the Program Coordinator at the Employee Development Center prior to the first day of class.</p>	
LENGTH:	1 Day	
COST:	None	
POC:	(301) 757-4122	

COURSE TITLE:	UNDERWATER ACOUSTICS I AND PASSIVE SONAR	
VENDOR:	Alan D. Stuart P.O. Box 393 Lemont, PA 16851	
LOCATION:	Employee Development Center, B2189 (PAX River, MD)	
	DATES: 01-02 DEC 04	NOMINATION DEADLINES: 01 NOV 04
TIME:	0800-1600 (16 hours)	
DESCRIPTION:	<p>This is one of a series of three underwater acoustics and sonar courses intended for managers, engineers, and others interested in this field and can serve as part of a new employees' orientation. Emphasis is placed on illustrating phenomena and principles through demonstrations and examples from common experience. <i>Topics presented with a minimum of mathematics.</i></p> <p>Materials: Each student receives a copy of the instructor's course notes.</p>	
OBJECTIVE:	<p>This course provides an introductory overview of passive sonar systems and their relationship to the underwater acoustics environment in which they function. Topics include: Historical background and introduction to US Naval sonar systems and platforms including sonobouys; review of decibel (dB) scales and references used in underwater acoustics; sound propagation in sea water including sound velocity profiles; cavitation considerations including threshold and limits; sound spreading and absorption losses; ambient, self and radiated noise characteristics; passive sonar equation and signal processing including detection threshold concepts, figure of merit and range considerations; topics of interest to course participants.</p>	
AUDIENCE:	This course is intended for anyone with a desire to learn about sonar acoustics, or anyone in need of a refresher.	
NOMINATIONS:	<p>NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development</p> <p>NOTE: Contractor personnel may attend on a space-available basis. Nominations must be made by letter addressed to the Program Coordinator. Once the nominee receives a confirmation of acceptance, a check made payable to the vendor must be sent directly to the Program Coordinator at the Employee Development Center prior to the first day of class.</p>	
COST:	\$500	
METHOD OF PAYMENT:	Vendor accepts GCPC (Government-wide Commercial Purchase Card).	
POC:	(301) 757-4122	

COURSE TITLE:	UNDERWATER ACOUSTICS II AND ACTIVE SONAR	
VENDOR:	Alan D. Stuart P.O. Box 393 Lemont, PA 16851	
LOCATION:	Employee Development Center, B2189 (PAX River, MD)	
	DATES: 13-14 DEC 04	NOMINATION DEADLINES: 13 NOV 04
TIME:	0800-1600 (16 hours)	
DESCRIPTION:	<p>This is one of a series of three underwater acoustics and sonar courses intended for managers, engineers, and others interested in this field and can serve as part of a new employees' orientation. Emphasis is placed on illustrating phenomena and principles through demonstrations and examples from common experience. <i>Topics presented with a minimum of mathematics.</i></p> <p>Materials: Each student receives a copy of the instructor's course notes.</p>	
OBJECTIVE:	<p>This course provides an introductory overview of active sonar systems and their relationship to the underwater acoustics environment in which they function. Topics include: A more detailed description of underwater sound propagation such as ray acoustics and convergence zones; sound channels: surface ducts, SOFAR, RAP; sea surface effects: scattering, Lloyd mirror; bottom effects: scattering, lateral waves; active sonar equation and signal processing including range-Doppler representation; active sonar reverberation: volume, surface, and bottom; target characteristics and constructions including target strength measurements; mono-static and multi-static target scattering including geometric and hull structure effects; echo formation and anechoic coatings; topics of interest to course participants.</p>	
AUDIENCE:	This course is intended for anyone with a desire to learn about sonar acoustics, or anyone in need of a refresher.	
NOMINATIONS:	<p>NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development</p> <p>NOTE: Contractor personnel may attend on a space-available basis. Nominations must be made by letter addressed to the Program Coordinator. Once the nominee receives a confirmation of acceptance, a check made payable to the vendor must be sent directly to the Program Coordinator at the Employee Development Center prior to the first day of class.</p>	
COST:	\$500	
METHOD OF PAYMENT:	Vendor accepts GCPC (Government-wide Commercial Purchase Card).	
POC:	(301) 757-4122	

COURSE TITLE:	UNDERWATER ACOUSTICS III AND SONOBUOY SYSTEMS	
VENDOR:	Alan D. Stuart P.O. Box 393 Lemont, PA 16851	
LOCATION:	Employee Development Center, B2189 (PAX River, MD)	
	DATES: 15-16 DEC 04	NOMINATION DEADLINES: 15 NOV 04
TIME:	0800-1600 (16 hours)	
DESCRIPTION:	<p>This is one of a series of three underwater acoustics and sonar courses intended for managers, engineers, and others interested in this field and can serve as part of a new employees' orientation. Emphasis is placed on illustrating phenomena and principles through demonstrations and examples from common experience. <i>Topics presented with a minimum of mathematics.</i></p> <p>Materials: Each student receives a copy of the instructor's course notes.</p>	
OBJECTIVE:	<p>This course provides a more in-depth overview of sonobuoy systems and their relationship to the underwater acoustics environment in which they function. Topics include: The basics of sonar transducers and arrays including beamforming, steering, and bearing angle; a more detailed description of underwater sound propagation in shallow water and the littoral ASW environment. Sonobuoy design and construction considerations and their deployment and tactical implications. Sonobuoy systems discussed include bathythermograph, ambient noise measurement, LOFAR, DIFAR, VLAD, as well as, DICASS, ADAR and other advanced concept systems. The course will feature special presentations from operator and system performance specialists, and some representative in-tank experiments.</p>	
AUDIENCE:	This course is intended for anyone with a desire to learn about sonar acoustics, or anyone in need of a refresher.	
NOMINATIONS:	<p>NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development</p> <p>NOTE: Contractor personnel may attend on a space-available basis. Nominations must be made by letter addressed to the Program Coordinator. Once the nominee receives a confirmation of acceptance, a check made payable to the vendor must be sent directly to the Program Coordinator at the Employee Development Center prior to the first day of class.</p>	
COST:	\$500	
METHOD OF PAYMENT:	Vendor accepts GCPC (Government-wide Commercial Purchase Card).	
POC:	(301) 757-4122	

COURSE TITLE:	UAV FLIGHT TEST INTRO	
VENDOR:	United States Naval Test Pilot School	
LOCATION:	USN Test Pilot School, B2168 (PAX River, MD)	
	DATES: TBD	NOMINATION DEADLINES:
TIME:	0800-1630	
DESCRIPTION:	<p>The Introduction to Unmanned Aerial Vehicle (UAV) flight test short course consists of three training phases that are designed to introduce and expose students to UAV flight test methods and techniques. First, students will receive a series of technical lectures on planning and executing test flights, fundamentals of ground control station design, instrumentation, and specific component testing (Navigation systems & data links). Second, students will be exposed to several UAV aircraft, including specific platform briefings from program managers or senior project engineers. Lessons learned from various UAV test programs will also be discussed during this phase. The final phase consists of "hands-on" evaluation with two separate UAV platforms. Several flight periods will be provided to allow students to interact with a UAV ground control station and expose students to UAV flight test operations by executing a simple UAV flight test.</p> <p>USNTPS Staff instructors or senior engineers from the Naval Air Systems Command (NAVAIR) will present all course material. The Naval Air Warfare Center Aircraft Division (NAWCAD, Webster Field Annex) will provide all UAV resources, including pilots and maintenance personnel.</p>	
OBJECTIVE:		
AUDIENCE:	Engineers and scientists involved in the test and evaluation of UAV systems.	
NOMINATIONS:	<p>NAVAIR TEAM employees should request training by logging onto SAP R/3 using the SAP logon-pad. Complete step-by-step instructions can be found on the Career Development Office website at : Career Development</p> <p>NOTE: NAVAIR TEAM employees must also contact the USNTPS to register. All external employees should contact the USNTPS directly to register and for payment instructions.</p>	
COST:	\$1800	
METHOD OF PAYMENT:	Internal Activity Allocation	
For more info., please contact the Short Course Department at the U.S. Naval TPS (301) 757-2137		
POC:	(301) 757-4122	