



DEFENSE ACQUISITION UNIVERSITY

TST 303 Advanced Test and Evaluation

100209

Course Learning/Performance Objectives followed by its enabling learning objectives on separate lines if specified.

1	Given DoD guidance assess the corresponding T&E impacts of recent legislative, regulatory, policy and guidance changes in the acquisition process .
	Assess problems/solutions for emerging T&E workforce / human resource management issues.
	Assess problems/solutions for emerging T&E process issues.
2	Given DoD guidance generate solutions for policy conflicts between local versus OSD/Service guidance.
	Defend a critical assessment of management issues relative to T&E operations.
3	Given DoD guidance contrast T&E processes for evaluating overall system performance, operational effectiveness, operational suitability, and military worth.
	Argue the Pro/Con of using a baseline comparison for T&E.
	Assess the impact of OSD and Congressional oversight on a T&E program.
	Outline the process for responding to congressional inquiries regarding T&E.
	Argue the purpose and importance of test article configuration management.
	Determine the impact of technical maturity on T&E processes.
	Evaluate the impact of using critical technologies with various technology maturity.
	Evaluate the impact of program reporting requirements on the T&E strategy, including T&E inputs to the DAES report / DAES principles.
	Describe waivers, deviations and other issues that commonly arise prior to OTRR, and how to handle these issues.
	Specify reasons why systems perform well during DT but are found not effective and/or not suitable during IOT&E.
	Specify reasons for good DT but not good IOT&E.
	Develop strategies to preclude having good DT but not good IOT&E.
	Prepare and present system maturity supporting information to an Operational Test Readiness Review decision maker.
	Determine possible interactions between T&E management and JCIDS developers.
	Specify actions associated with development of mission-level evaluation criteria, and advice to developers of JCIDS documents.
	Determine T&E processes for evaluating all elements of system effectiveness.
	Determine T&E processes for evaluation of overall system performance.
	Determine T&E processes for evaluation of system military worth.
	Describe T&E documents and processes for review and approval of T&E documentation.
	Compile issues affecting T&E planning that requires a flight clearance certification.
	Assess the impact/reactions to test article failure during test.
	Discuss the statutory and regulatory policy for acquisition category designations (ACATs) and impact on T&E.
	Describe the elements of what constitutes a robust test program.
	Discuss IOT&E entrance criteria, including how to determine whether a product is ready for IOT&E.
	Discuss the operational test readiness review process, including the role of the Component Acquisition Executive.
	Discuss what constitutes production representative test articles, and the implications on the conduct of OT&E.
Describe how data should be captured to support baseline comparisons.	
Discuss assessments that occur to determine system progress toward achieving operational effectiveness and suitability, and military utility during the EMD phase.	
4	Describe new developments in T&E processes, techniques, concepts, principles, and practices, as they apply to weapons and IT systems, and systems integration.
	Document T&E applications of advanced technology for test equipment, including instrumentation, and data collection and processing.
5	Given DoD guidance, compare T&E processes for weapon systems versus those for information technology programs, and assess the utility of modeling and simulation for corresponding support of a T&E strategy.
	Specify peculiarities of T&E for IT development programs.
	Contrast T&E processes for information assurance testing and interoperability testing.
	Contrast the influence of the various integrated architecture views on execution of a T&E strategy.
	Assess the critical aspects for conducting T&E of Netcentric operations for SoS/FoS.



DEFENSE ACQUISITION UNIVERSITY

TST 303 Advanced Test and Evaluation

100209

Course Learning/Performance Objectives followed by its enabling learning objectives on separate lines if specified.

	<p>Consider the benefits and constraints of using M&S for T&E.</p> <p>Propose when/how M&S can be used for T&E during system development.</p> <p>Critique the concept of using live test data to validate and improve M&S models.</p> <p>Determine Pro/Con of using distributed testing with federations of live / virtual / constructive simulations to represent mission environments for SoS/FoS.</p>
6	<p>Given DoD guidance assess T&E issues that may arise during the system development, including implications of corresponding special considerations in a T&E strategy.</p> <p>Evaluate influence on T&E strategy of a program being designated multi-service.</p> <p>Evaluate the impact of COTS and NDI components on developing a T&E strategy.</p> <p>Identify the difference and purposes between Contractor T&E, and Government conducted T&E, when each is more appropriate, and how to integrate both contractor and government test requirements.</p> <p>Defend a program office integrated T&E strategy.</p> <p>Specify Pro/Con of using combined or concurrent T&E events for the T&E strategy.</p> <p>Assess a program office integrated T&E strategy for strengths and weaknesses.</p> <p>Derive potential impacts on the T&E strategy of having joint mission capabilities.</p> <p>Evaluate a T&E program for balance among T&E cost, schedule, and performance requirements.</p> <p>Evaluate the Pro/Con of using training events and activities for T&E.</p> <p>Assess the impact of testing with coalition and Allied forces.</p> <p>Assess the impact of testing in a deployment environment.</p> <p>Compile issues associated with DoD cross-range scheduling and test operations.</p> <p>Assess T&E issues on interagency use of facilities, including NASA, DOT, DOE, DHS, NSA, NGA.</p> <p>Discuss the purpose of thresholds and objectives and how they impact T&E planning, execution, and reporting.</p> <p>Evaluate the impact of requirements changes on CTPs, COIs, MOEs, and MOPs.</p> <p>Identify the pros and cons of conducting T&E in a laboratory/chamber environment followed by natural environment testing.</p> <p>Identify the trade-offs when considering the use of test beds, prototypes, and low rate initial production articles.</p> <p>Identify the process to account for requirements deviations and waivers.</p> <p>Evaluate the integration of information technology (IT) testing into test and evaluation strategy as it applies to the overall program lifecycle.</p> <p>Identify implications of joint mission capabilities for the development and testing of a specific system.</p> <p>Given system documentation critique the planning and execution of software integration testing.</p>
7	<p>Given DoD guidance determine T&E expectations from congressional / OSD / service / range perspectives.</p> <p>Assess a T&E case for evidence of ethical, responsible conduct.</p> <p>Negotiate the role of T&E among other program stakeholders.</p> <p>Describe expected professional ethics for T&E personnel.</p>
8	<p>Given DoD guidance assess activities necessary to manage and control a test site.</p> <p>Describe the impact of legislation directing changes and standardization of test range charge policies and differences between test and training range charge policies and scheduling priorities.</p> <p>Discuss the role of TRMC including requirement for budget certifications and development of a 10-year strategic plan.</p> <p>Determine funding sources for test support shortfalls.</p> <p>Assess the impact of testing with frequency spectrum constraints.</p> <p>Propose alternative resources with the potential to support the T&E strategy.</p> <p>Defend rationale for new T&E capability improvements necessary to support the T&E strategy.</p> <p>Document activities needed for test site management and control.</p> <p>Evaluate test site activities for compliance with OSD/Service guidance.</p> <p>Assess problems/solutions for emerging T&E infrastructure / facility issues.</p>



DEFENSE ACQUISITION UNIVERSITY

TST 303 Advanced Test and Evaluation

100209

Course Learning/Performance Objectives followed by its enabling learning objectives on separate lines if specified.

	Discuss T&E issues associated with the need for test infrastructure that supports critical near-term and future requirements, such as expanded footprints; frequency spectrum allocation limitations; sustainable range initiatives; and future challenges with Directed Energy and hypersonics testing.
	Discuss needed test range capabilities to satisfy T&E needs, including instrumentation, operating areas, safety requirements, EIS, and range scheduling and control requirements.
	Compile a list that describes alternative contracting processes.
9	Given system documentation recommend a T&E strategy that effectively supports corresponding systems engineering activities.
	Given DoD guidance determine a resource estimate for T&E in a given test project.
	Construct a T&E strategy for DT support of SE activities.
	Develop a T&E strategy for integrating contractor testing with SE activities.
	Appraise the potential of a T&E strategy that is integrated with SE activities to assure a successful T&E program.
	Describe a process for assembling a T&E team to support a program T&E strategy.
	Construct an adequate but cost effective T&E program for a new start acquisition.
	Create a concept of how T&E would interact with scientific/engineering elements to optimize design and manufacturing decisions.
	Recommend processes for integration of SEP development and requirements for DT&E.
	Critique and defend an integrated T&E schedule that incorporates critical acquisition and SE events.
	Determine interactions between T&E strategy and program management functions.
	Identify how and when to use "event driven" strategy and describe its pros and cons to T&E and program management.
	Plan a T&E WIPT to draft a TES and TEMP and complete its coordination and approval.
	Describe the role and responsibilities of T&E in each of the program management forums, e.g., T&E WIPT, IIPT, OIPTs, and DABs/ITABs.
10	Given DoD Guidance recommend alternatives for reducing cost drivers within test support resources.
	Determine processes for validation of threat information and targets.
	Defend a manpower requirements estimate for a given test project.
	Defend a cost estimate for a given test project.
	Defend a support materials estimate for a given test project.
	Describe the PPBE process.
	Describe the financial management process.
	Identify the different categories of test resources that are required in the test and evaluation strategy and TEMP.
	Identify the sources for threat information, and how to include the threat information in the test and evaluation strategy and resource requirements.
	Describe the validation of threat simulator systems.
11	Given a scenario develop and defend a listing of factors that influence the T&E strategy, and create a concept for implementing a corresponding T&E Risk Management Board.
	Derive an estimate of T&E cost risks and mitigations.
	Derive an estimate of T&E schedule risks and mitigations.
	Discuss the implications of system safety and ESOH requirements when developing a test and evaluation strategy.
12	Given a T&E organization perform an evaluation of the utility of corresponding enterprise metrics for efficient and effective T&E operations.
	Critique T&E best practices.
	Compile a list of T&E best practices.
	Propose T&E success criteria for a given situation.
	Compile a listing of metrics being used at the enterprise level.
	Appraise the utility of metrics used to measure organization efficiency.
	Appraise the utility of metrics used to measure organization effectiveness.
	Recommend metrics that could be used to track execution of the T&E strategy.
	Develop a plan for managing, tracking, and reporting on the progress of the system T&E strategy.



DEFENSE ACQUISITION UNIVERSITY
TST 303 Advanced Test and Evaluation

100209

*Course Learning/Performance Objectives followed by its
enabling learning objectives on separate lines if specified.*

	Determine elements to be considered in building a good T&E program, including defining objectives (technical and mission related) and their associated settings/scenarios.
	Determine opportunities for using qualitative rating scales.
	Create a test organization process improvement plan.
	Given a T&E organization determine how to demonstrate the value of T&E.
	Identify T&E success criteria for each test phase.
13	Identify other potential non-traditional testing available to support T&E programs and determine their appropriateness: ACTD, FCT, JT&E, and T&E for Rapid Acquisition.
	Identify T&E issues, risks and mitigations, concerning rapid fielding of a system.
	Identify T&E issues, risks and mitigations, concerning use of COTS and/or NDI within a system.
	Identify T&E issues, risks and mitigations, concerning the ACTD/JCTD program.
	Identify T&E issues, risks and mitigations, concerning the Foreign Comparative Test (FCT) and Defense Acquisition Challenge (DAC) programs.
	Identify T&E issues, risks and mitigations, concerning the Joint T&E program.
	Identify T&E issues, risks and mitigations, concerning T&E in support of science and technology programs.
14	Given a scenario develop corresponding detailed T&E test procedures and produce an adequate strategy for managing contractor reliability growth T&E.
	Produce a description of reliability T&E activities to be included in the T&E strategy.
	Assess the adequacy of the contractor's integrated T&E plan from the reliability growth standpoint.
	Justify activities to be included in contracting documents for T&E management.
	Determine T&E processes for evaluating elements of system suitability, including reliability growth.
	Analyze various reliability test data products to evaluate results of the reliability testing.
	Critique a reliability growth plan and describe its benefits.