DEFENSE ACQUISITION UNIVERSITY
TST 204 – INTERMEDIATE TEST AND EVALUATION

160315

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

1	Given a set of acquisition-related documents that describe a notional weapon system, the student will analyze the information needed to complete a Milestone A TEMP, and support T&E planning efforts based upon the analyzed documents.
	Demonstrate an ability to compare capabilities across program documents.
	Demonstrate an ability to analyze T&E planning documents for similarity of contents.
2	Given current local, national, and/or international DoD T&E policy and events, the student will discuss potential impacts to the DoD T&E acquisition community and associated stakeholders based upon current policy changes and trends.
	Given local, national, and international T&E policy and events, determine potential impacts on the external environment and end user.
	Given T&E policies, principles, procedures, requirements and regulations, determine potential impacts to program decision-makers.
3	Given a system description, the student will correctly assess a program T&E Strategy.
	Determine impacts of multi-service T&E, on a program T&E strategy.
	Determine impacts to the T&E strategy, commonly experienced by the DoD T&E community.
	Determine methods to tailor a T&E strategy for cost effective T&E.
	Given a system description, assess a Milestone A TEMP for required content to support a system development process.
	Given a system description, determine required resources to ensure that the T&E strategy is executable, and supports the overall program plan and T&E Strategy; and that necessary resources are leveraged where possible and are available when needed.
	Recognize the advantages and disadvantages of specific verification and T&E methods.
	Contrast the risks and benefits of using integrated T&E; and how CT, DT, OT, and LFT&E fit together during systems development.
	Identify the T&E WIPT/ITT/Combined Test Team needed to address T&E issues & documentation, to support the T&E strategy, approach, and overall program plan.
4	Given a MS A TEMP, the student will correctly assess issues related to T&E of Information Technology Systems.
	Recognize T&E's role in translating requirements documents (cybersecurity strategy, Program Protection Plan, Information Support Plan) to identify evaluation criteria to support T&E planning efforts.
	Given a MS A TEMP, develop issues pertaining to cybersecurity, systems engineering and IT system development.
	Given a MS A TEMP, critique the adequacy of the cybersecurity strategy.
	Given a MS A TEMP, critique the adequacy of T&E approaches for software-intensive systems.
	Given a MS A TEMP, critique T&E methodologies for assessing system interoperability.
	Recognize how software and cybersecurity T&E fit into system development.
	Given a MS A TEMP, analyze issues related to hardware and software component interoperability, and integration (to function and perform properly) in a large system of systems.
5	Given a scenario and DoD policy, the student will develop Test and Evaluation Master Plan (TEMP) content.
	Given a scenario, assess whether the capability requirements are well defined, can be measured and/or assessed during testing, and are relevant to the operational mission.
	Given a scenario, assess whether planned tests support the test objectives/system requirements; and whether data collected will support established effectiveness, suitability, and survivability metrics.
	Recognize T&E's role during development of requirements documents (Initial Capabilities Document, Capability Development Document, Capability Production Document, System Threat Assessment Report, and Operational Mode Summary/Mission Profile).
	Given DoD policy, critique a TEMP and develop required content to support a system's technical requirements and acquisition strategy; and common DoD policies, practices, and procedures.
	Given a TEMP, determine necessary T&E resources and infrastructure requirements and shortfalls (people/knowledge, funding, facilities/ranges, instrumentation and associated support, software systems integration labs, and modeling & simulation).
	Identify organizations with roles and responsibilities in providing for, or overseeing the T&E strategy and TEMP.
	Recognize where environmental, interoperability, cybersecurity, and mission-level testing should fit into system development.
	Given a TEMP, construct a Developmental Evaluation Framework Matrix, and discuss how collected data supports the evaluation framework.
	Recognize processes for evaluating a system's survivability and lethality.
	Discriminate between LFT&E of lethality and vulnerability, and OTA evaluation of survivability.
	Given a scenario, develop Critical Technical Parameters (CTPs), Measures of Effectiveness (MOEs), Measures of Suitability (MOSs), and data requirements to support assessment and evaluation of system performance requirements, Key Performance Parameters (KPPs), Key System Attributes (KSAs), and Critical Operational Issues (COIs)
6	Given a system description, the student will identify issues and risks associated with reliability, availability, and maintainability T&E.
	Identify key characteristics and factors affecting DT&E and OT&E of system reliability and reliability growth
	Determine risks and constraints when assessing system under test (SUT) reliability, maintainability, and availability against system requirements in DT&E and OT&E.
	Critique methodologies for reliability growth T&E.
	Analyze the risks associated with the various reliability growth planning factors for a given program.

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	Analyze the potential of a T&E reliability growth strategy that is integrated with SE reliability growth activities to assure a successful T&E reliability growth program.
7	Given a scenario and DoD guidance, the student will develop information for a data management plan in support of a test and evaluation.
	Recognize DoD policy on T&E data management, including data security, and archiving and releasing test data.
	Describe the data authentication process of verifying and validating the test data set, protecting the integrity of test data, and ensuring validity of collected data to meet test objectives.
	Recognize the need for measurable, high-quality, timely, and cost-effective data; to enable unbiased T&E results.
	Describe the processes for data failure definition and scoring; including Reliability, Availability and Maintainability scoring conferences.
	Develop information for a data management plan in support of a test and evaluation.
8	Given key requirements of a notional weapon system, the student will develop an operational or developmental test scenario (high-level test plan) that addresses the COI/CTP and supports the overall program plan.
	Given key requirements of a notional weapon system, develop a test scenario (high-level test plan); including identification of test conditions, and controlled and uncontrolled variables.
	Given key requirements of a notional weapon system, develop a test scenario (high-level test plan) that supports the overall program plan, including opportunities for combined DT/OT.
9	Given a system description, the student will correctly demonstrate DT&E planning, rehearsing (pilot test), and execution in an organized fashion; including data collection, analysis, evaluation, after action review, and reporting.
	Given a system description, document a T&E strategy/test plan that integrates policy, program requirements, cost and resource estimates, evaluation framework, and the T&E schedule to accomplish program goals.
	Given a system description, assess T&E related factors (including resources, product maturity, and personnel).
	Correctly plan a test readiness review.
	Given a system description, monitor safety compliance (such as people and item/system under test) and environmental requirements and constraints, to protect resources and comply with established policies.
	Given a system description, commit resources as needed to complete T&E activities/events with consideration for financial cost estimates for T&E support and resources.
	Given a system description, analyze raw data into organized and meaningful data products, to support planned analysis, evaluation, and reporting.
	Given a system description, deliver T&E presentations (quick-look, test, analysis, and evaluation reports) to capture test background, methodology, limitations, results, evaluation, and recommendations to support decision-making.
	Given a system description, develop information on labor and other T&E support and resources needed to support a test project.
	Given a system description, conduct a test readiness review to determine system/test article readiness.
10	Given a system description and DoD guidance, the student will develop procedures and constraints for test operations to comply with safety, environmental, and risk management policies.
	Given a system description, evaluate T&E risk factors, along with likelihood and consequences of occurrence.
	Given a system description, develop information for risk mitigation/risk management plan for specific T&E risk factors.
	Recognize the role of ESOH and risk management to support T&E planning efforts.
11	Given a test scenario, test data, and DoD guidance, the student will create an OT test report based on their evaluation of incidents that occurred during testing.
	Given a test scenario, analyze challenges and problems that occurred during testing; to include weighing relevance and accuracy of information that affects solutions.
	Report test results, limitations, and recommendations to support decision making; including the formulated test conclusions that are based on these performance results.
	Given a test incident, evaluate the T&E strategies and solutions used during the incident.
	Given test data, analyze data inconsistencies, gaps, errors, and other deficiencies that could degrade analysis and evaluation.
12	Given a scenario, the student will anticipate the needs of the Operational Test Agency, Program Office, and other internal and external customers of the acquisition community.
	Given a scenario, recognize ethical standards and issues related to T&E, including the need to provide unbiased T&E analysis, evaluation, and reporting/results.
	Given a scenario, make good decisions (even when data are limited or solutions produce negative consequences), by anticipating the implications of T&E results and decisions.
	Given a scenario, analyze the impact of identified T&E risk factors and potential resource problems/issues (such as lack of time, money, workforce, test ranges/facilities, test articles/platforms, environmental issues, new technology, and product/system maturity) on the overall program plan and schedule, and mitigation recommendations.
	Anticipate the needs of the Operational Test Agency, Program Office, and other internal and external customers of the acquisition community.
	Develop solutions for the needs of the Operational Test Agency, Program Office, and other internal and external customers of the acquisition community.
13	Given a scenario, the student will determine the appropriate test design, analysis, and evaluation methods to apply to DoD T&E.
	Analyze the applicability of design of experiments to DoD T&E.
	Determine implications of using statistical methods, and develop appropriate analysis and evaluation techniques.
14	Given DoD guidance, the student will discuss corresponding test strategies for integrating modeling and simulation with system T&E.
	Recognize the appropriate use of M&S to supplement live test data, meet test objectives, and ensure the adequacy of evaluation.

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	Identify the benefits and risks associated with using M&S to evaluate systems and system-of-systems.
	Recognize potential uses of distributed testing, including the use of live, virtual, and constructive models and simulations.
	Identify the implications of M&S VV&A process requirements.
15	Given a T&E organization, the student will correctly develop T&E best practices and lessons learned.
	Identify the benefits of using T&E best practices and applying/adapting lessons learned from similar test activities and events to deliver high quality T&E products and services, and ensure continuous improvement of T&E methods and processes.
	Document lessons learned on topics such as data collection, analysis, and evaluation.
16	Given a system description, the student will correctly construct solutions for T&E problems; including rapidly responding and adapting to new information, changes to requirements documents, and changing circumstances that impact the T&E strategy, approach, and overall plan.
	Given a T&E scenario, identify potential or realized problems based upon the information provided.
	Given a scenario involving the receipt of new information that impacts T&E activities, construct a solution that responds and adapts to the identified T&E problem.
	Given a scenario with changes to requirements documents, construct a solution that responds and adapts to the identified T&E problem.
	Given a scenario with changing circumstances that impact the T&E strategy, approach, and overall plan; construct a solution that responds and adapts to the identified T&E problem.
17	Given a system case, the student will correctly generate OT&E planning, execution, and reporting documentation.
	Given a system case, correctly manage test execution/risk mitigation factors (safety, schedule, resources, fault isolation, and priorities) by adapting to real-time changes/challenges, to optimize test opportunity and coverage of key parameters/factors/conditions that have a significant effect on operational performance.
	Given a system case, assess T&E related factors (including resources, product maturity, and personnel) to support an operational test readiness review for determining system/test article readiness.
	Given a system case, confirm data collection tools are ready, operators and maintainers are trained, and the system under test is configured as required to execute the test events/activities and to collect the required data.
	Apply appropriate evaluation criteria for effectiveness, suitability, and Human Systems Integration elements to T&E planning and execution.
	ELO 17.5: Given a system case, schedule the acquisition and deployment of all necessary resources (facilities; trained operators, maintainers and testers; and properly configured systems and instrumentation) to the test sites in time to provide pre-test rehearsals, communications, and instrumentation checks.
	Given a system case, control the test schedule to complete all required activities within the boundaries of the test plan, while optimizing data collection to support the planned analysis and T&E objectives.
	Given a system case, generate test/analysis/evaluation reports to capture test background, methodology, limitations, results, evaluation, and recommendations to support decision making.
	Develop T&E input to technical and programmatic reviews, to support DoD decision making.
	Describe the areas/domains encompassed by operational effectiveness, operational suitability, and human systems integration.