



DEFENSE ACQUISITION UNIVERSITY

ISA 101 – BASIC INFORMATION SYSTEM ACQUISITION

151001

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

1	<p>Given a Department of Defense (DoD) Information Technology (IT) acquisition scenario, learner will assess whether objectives in planning documents are stated clearly enough to support IT capability development.</p> <p>Explore recent changes to DoD information technology systems capabilities management policies and procedures.</p> <p>Analyze the JCIDS impact on the development and acquisition of information technology systems from both weapon systems and business systems perspectives.</p> <p>Given an overview of the DoD capability planning processes, its objectives and expected results, identify capability planning documents from a list.</p> <p>Presented an overview of the Defense Business System (DBS) Business Capability Definition Phase, identify the three principal questions the Functional Sponsor will define.</p> <p>Given an overview of the DoD capability planning processes, its objectives and expected results, identify at least two benefits of these processes.</p> <p>Given a description of an IT acquisition need, assess documentation to ensure specific information provides a clear understanding of the intended IT acquisition objectives from program outset.</p>
2	<p>Given Government rules and directives governing Information Technology (IT) acquisitions, learner will establish reasonable and practical performance expectations based on cost and schedule estimates.</p> <p>Given an IT/SIS acquisition program, apply cost estimation methodologies to recommend appropriate strategies for budget execution within the legislation and guidance of PPBE.</p> <p>Given an IT/SIS acquisition program, recognize the mathematical processes of the various cost estimation methodologies available to recommend appropriate strategies for budget execution within the legislation and guidance of PPBE.</p> <p>Apply multiple cost estimation methodologies to the analysis of an acquisition program to determine the status of budget execution throughout the acquisition life cycle, understanding the relative accuracy of the methods at different points within the acquisition framework.</p> <p>Identify the process for generating a Program Office Estimate, including the statutory and practical applications of such estimates, and the relationship of those program level budgets to the various independent cost estimates (ICEs).</p> <p>Determine the impact of COTS and other Cost Drivers on achieving an accurate estimation of Program costs.</p>
3	<p>Given a scenario, evaluate an acquisition lifecycle plan for a software-reliant system.</p> <p>Describe rules, regulations, guidelines and Best Practices for Portfolio Management.</p> <p>Discuss the impact of Title 40/CCA on acquisition of Information Technology (IT).</p> <p>Apply the eleven (11) compliancy requirements of Title 40/CCA to a given DoD IT System.</p> <p>Document the requirements for project/program reporting listed in OMB Circular A-11 Section 55.</p> <p>Given the acquisition lifecycle, identify at least one major activity related to the BCA that should occur at relevant acquisition milestones</p> <p>Determine what should be assessed in IT areas when developing a PS BCA.</p> <p>Identify relevant considerations that influence the acquisition lifecycle of a software-reliant system.</p> <p>Apply the Program Protection Plan to an IT Acquisition Scenario.</p>
4	<p>Given a scenario, create an IT measurement and analysis program.</p> <p>Given a scenario, identify program IT decision information requirements.</p> <p>Create a set of program IT measures that are linked to the program decision information requirements.</p> <p>Apply the measurement results to support IT program decisions.</p>
5	<p>Given a DoD IT acquisition program, evaluate the Software Engineers support to the Systems Engineer throughout the life-cycle of an IT product.</p> <p>Track how the DoD information technology systems engineering process supports DoD Acquisition Management processes</p> <p>Explain the nuances of the Systems Engineering process for IT systems compared to the process for developing and acquiring hardware-based systems</p> <p>Identify DoD SE technical reviews, technical processes, and technical management processes</p>
6	<p>Given a Department of Defense (DoD) Information Technology (IT) acquisition scenario, create appropriate acquisition strategies to promote the most effective technical and business solution.</p> <p>Explain the contents of an Initial Capabilities Document (ICD) with respect to an IT/SIS system and the JCIDS contribution to the Alternate Systems Review</p> <p>Demonstrate how the Analysis of Alternatives (AoA) guides the Program Planning.</p> <p>Given a scenario, choose the appropriate acquisition model for inclusion in the Acquisition Strategy (AS)</p>



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	Describe the key components of a TEMP and Systems Engineering Plan (SEP)
	Complete a simple cost estimate using the provided exercise scenario.
	Demonstrate the compliance of the exercise system with the Clinger-Cohen Act (CCA) criteria.
	Demonstrate how a risk assessment is used early in the lifecycle.
	Analyze an IT/SIS life-cycle support plan for the exercise scenario.
	Correctly apply Department of Defense (DoD) RM Guidance to a sample IT System Acquisition project.
	Given a DoD acquisition scenario, apply laws and DoD directives to ensure successful IT systems management throughout the acquisition life cycle.
	Given a description of an IT acquisition need, assess documentation to ensure specific information provides a clear understanding of the intended IT acquisition objectives from program outset.
	Given a scenario, identify program IT decision information requirements.
	Create a set of program IT measures that are linked to the program decision information requirements.
	Apply the measurement results to support IT program decisions.
	Apply the Program Protection Plan to an IT Acquisition Scenario.
7	Given a Department of Defense (DoD) Information Technology (IT) acquisition scenario and associated acquisition hardware/software documentation, learner will develop cybersecurity requirements regarding security measures, continuity of operations, and protection of acquisition systems and system content.
	Identify the basic concepts, threats, and best practices associated with cybersecurity in the DoD.
	Identify the policies and principles that support cybersecurity for DoD Information Technology (IT)
	Identify the major principles and components of the Risk Management Framework (RMF) for DoD Information Technology (IT)
	Identify the six steps of the Risk Management Framework (RMF) for DoD Information Technology (IT)
8	Given a Department of Defense (DoD) Information Technology (IT) acquisition scenario, the learner will apply Enterprise Architecture (EA) products to ensure compliance with DoD EA strategic goals.
	Explain how Enterprise Architecture can be used to describe the relationships between business processes and the technology infrastructure that supports and enables them.
	Describe the architectural relationship between weapons systems and their embedded information technology.
	Explain how the DoD Architecture Framework provides the structure needed to develop integrated architectures in support of net-centric tenants and transformational processes.
	Recognize the potential benefits associated with the development and maintenance of an Information Support Plan (ISP)
	Explain how the DoD IT Standards Registry (DISR) supports DoD Enterprise Architecture efforts and improve information system interoperability and integration.
	Explain how Global Information Grid (GIG) / DoD Information Network (DoDIN) policy and requirements impacts information technology acquisitions.
	Identify the concepts of Open Systems Architecture (OSA) and Service Oriented Architecture (SOA) when designing and developing IT software and systems.
	Given an acquisition scenario, identify the laws and policies requiring the uses of Enterprise Architecture tools and concepts.
9	Given a Department of Defense (DoD) Information Technology (IT) acquisition scenario, the learner will develop risk mitigation approaches in support of the government's evaluation and management of the given IT acquisition.
	Define the elements that constitute an effective Risk Management (RM) program for an IT system acquisition.
	Identify the two components of risk
	Identify how risk, issue, and opportunity management interrelate.
	Identify risks inherent to Information Technology (IT) system acquisition.
	Apply the five components of the DoD Risk Management Process Model to a given IT acquisition scenario
10	Given a Department of Defense (DoD) Information Technology (IT) acquisition scenario, create appropriate acquisition strategies to promote the most effective technical and business solution.
	Update key Program budget inputs needed for the exercise system EMD Phase.
	Update appropriate Post Deployment Software Support (PDSS) risks as a result of the TMRR phase exercise situation.
	Describe the contents, use, and role of the Information Support Plan (ISP) plays in SIS acquisition and development efforts.



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	<p>Given a DoD acquisition scenario, apply laws and DoD directives to ensure successful IT systems management throughout the acquisition life cycle.</p> <p>Given a description of an IT acquisition need, assess documentation to ensure specific information provides a clear understanding of the intended IT acquisition objectives from program outset.</p> <p>Given an IT acquisition scenario, identify the most appropriate software methodology (or a combination of methodologies) to meet the expectations of the government.</p> <p>Given a scenario, identify program IT decision information requirements.</p> <p>Create a set of program IT measures that are linked to the program decision information requirements.</p> <p>Apply the measurement results to support IT program decisions.</p> <p>Given an IT acquisition scenario, choose the appropriate controls for a system based on confidentiality, integrity, or availability requirements.</p>
11	<p>Given a DoD IT acquisition program, evaluate the Software Engineers support to the Systems Engineer throughout the life-cycle of an IT product.</p> <p>Relate reasons why Configuration Management (CM) is critical to the success of Software Intensive Systems.</p> <p>Identify at least three reasons why interface management and documentation are important to the development of DoD Software Intensive Systems.</p> <p>Describe why continuing the spectrum management process throughout the lifecycle of an IT program is critical.</p> <p>Identify the underlying reasons for DoD policy regarding employing an Open Systems Approach (OSA) and its associated principles.</p> <p>Recognize potential areas of software safety issues and risks when reviewing acquisition documents.</p> <p>Explain the characteristics and importance of sound data management practices during the development process.</p> <p>Identify the three cloud deployment models</p> <p>Recognize the benefits of using Open Source Software in your systems design.</p>
12	<p>Given a Department of Defense (DoD) Information Technology (IT) acquisition scenario, evaluate various software development methodologies.</p> <p>Compare and contrast the major DoD software development paradigms and recognize new development paradigms and trends.</p> <p>Identify best practices in order to reduce software assurance vulnerabilities.</p> <p>Identify unique issues and costs associated with Commercial Off The Shelf (COTS) components and software systems during a software development effort.</p> <p>Identify the laws and policies requiring the use of software assurance.</p> <p>Recognize the benefits of applying Capability Maturity Model Integrated (CMMI) concepts and principles to a DoD SW development project</p>
13	<p>Given a Department of Defense (DoD) Information Technology (IT) acquisition scenario, apply the principles of Continuous Process Improvement (CPI) to ensure the highest quality in acquired IT products and services.</p> <p>Identify the DoD policy that describes the Implementation and Management of the DoD-Wide Continuous Process Improvement Program</p> <p>Define Continuous Process Improvement (CPI)</p> <p>Define Business Process Reengineering (BPR)</p>
14	<p>Given an information technology system, students will apply system and software Quality, Verification and Validation (V&V), and Test and Evaluation (T&E) principles, processes, methods, and tools to produce, test, verify, and validate the system's technical, functional, and performance characteristics (including interoperability).</p> <p>Based on accepted software quality definitions, recognize the quality issues unique to software.</p> <p>Recognize the definitions of software quality and be familiar with the quality issues unique to software.</p> <p>Identify practices and processes that are commonly found in quality software development efforts.</p> <p>Investigate software test Best Practices to develop elements of an effective IT/SIS test program.</p> <p>Identify lifecycle testing events and issues, the purpose of independent verification and validation (IV&V), and the software test and evaluation mission.</p>
15	<p>Given a Department of Defense (DoD) Information Technology (IT) acquisition scenario, decide if the contractual artifacts are an effective technical and business solution.</p> <p>Explain the connection between the acquisition of Information Technology systems and the rules and regulations guiding those acquisitions as propounded in the FAR and DFARS.</p> <p>Identify the elements of Performance-Based Acquisitions (PBA) and Performance-Based Services Acquisitions (PBSA)</p>



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	<p>Explain the relationship among the Contracting Officer, Program Manager, and Contracting Officer's Representative</p> <p>Recognize the association of acquisition planning to the contracting strategy.</p> <p>Recognize the particular aspects of market research unique to IT</p> <p>Recognize different types of data rights</p> <p>Given a scenario, differentiate between a requirement that is performance or outcome-focused versus one that is method or procedure-focused.</p> <p>Given an IT requirement, choose between a development and a commercial acquisition contracting approach.</p> <p>Given a scenario, identify the requirement for a Modular Contracting solution</p> <p>Given a scenario, evaluate an acquisition strategy that offers optimal opportunity for competitive acquisition</p>
16	<p>Given a Department of Defense (DoD) Information Technology (IT) acquisition scenario, create appropriate acquisition strategies to promote the most effective technical and business solution.</p> <p>Evaluate the risks of a contractor/vendor's ability to conform satisfactorily the provisions of an IT System and included software development/acquisition contract.</p> <p>Select software-related criteria appropriate for Critical Design Review (CDR)</p> <p>Apply Risk Management principles in identifying program risks and related software measures relevant to the SIS development represented by the example IT program scenario.</p> <p>Given a level Work Breakdown Structure (WBS) in a scenario, complete the contractor WBS to level 5</p> <p>Explain the purpose and components of the contractor's Software Development Plan (SDP) for the exercise problem.</p> <p>Given an IT acquisition scenario, recommend an incentive structure.</p> <p>Given a description of an IT acquisition need, assess documentation to ensure specific information provides a clear understanding of the intended IT acquisition objectives from program outset.</p> <p>Given an IT acquisition scenario, identify the most appropriate software methodology (or a combination of methodologies) to meet the expectations of the government.</p> <p>Given a Department of Defense (DoD) Information Technology (IT) acquisition scenario, apply the principles of Continuous Process Improvement (CPI) to evaluate a vendor's potential to deliver quality software products within cost and schedule perimeters</p> <p>Given a scenario, identify program IT decision information requirements.</p> <p>Create a set of program IT measures that are linked to the program decision information requirements.</p> <p>Apply the measurement results to support IT program decisions.</p>
17	<p>Given a Department of Defense (DoD) Information Technology (IT) acquisition scenario, apply emergent and recommended conventions in the procurement and management of IT services.</p> <p>Describe emerging and advanced information technologies.</p>
18	<p>Given a Department of Defense (DoD) Information Technology (IT) acquisition scenario, learner will apply software/maintenance modification strategies to support current end user requirements and/or improved performance of delivered DoD software products.</p> <p>Identify the important software life cycle planning documents and their major components.</p> <p>For an existing IT/SIS, recognize critical success factors for software transition.</p> <p>Describe the keys to successful software sustainment and support.</p> <p>Compare and contrast the types of software maintenance.</p> <p>Explain the elements, purpose, outcomes, and issues of the DoD software disposal process.</p> <p>Using the sample exercise, identify critical success factors for software transition.</p> <p>Identify relevant considerations that influence the acquisition lifecycle of a software-reliant system.</p>
19	<p>Given a Department of Defense (DoD) Information Technology (IT) acquisition scenario, create appropriate acquisition strategies to promote the most effective technical and business solution.</p> <p>Given the acquisition lifecycle, identify at least one major activity related to the BCA that should occur at relevant acquisition milestones</p> <p>Determine what should be assessed in IT areas when developing a PS BCA.</p> <p>Identify relevant considerations that influence the acquisition lifecycle of a software-reliant system.</p> <p>Given a scenario, identify program IT decision information requirements.</p> <p>Create a set of program IT measures that are linked to the program decision information requirements.</p> <p>Apply the measurement results to support IT program decisions.</p>



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