



RESEARCH
AND ENGINEERING

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE

3030 DEFENSE PENTAGON
WASHINGTON, DC 20301-3030

JUN 11 2015

MEMORANDUM FOR PRESIDENT, DEFENSE ACQUISITION UNIVERSITY

SUBJECT: FY 2016 Annual Certification – Test and Evaluation (T&E) Acquisition Career Field

Reference: DoD Instruction 5000.66, "Operation of the Defense Acquisition, Technology, and Logistics Workforce Education, Training, and Career Development Program," December 21, 2005

As the functional leader for the subject career field within the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics and as required by the Reference, I establish, oversee, and maintain the education, training, and experience requirements including competencies and certification standards, position category descriptions (PCDs), and content of the Defense Acquisition University (DAU) courses as current, technically accurate, and consistent with DoD acquisition policy.

My staff along with the DAU T&E Performance Learning Director and T&E course managers conducted a full review of the T&E course curriculum. The T&E Functional Integrated Product Team (FIPT) reviewed the T&E Workforce Competency Model, the T&E PCD, T&E-specific requirements for the Chief Developmental Tester, T&E Certification Guides, and T&E training standards. The T&E FIPT is led by my Deputy Director for T&E Competency and Development and composed of DoD Component T&E subject matter experts, representatives from DAU, and representatives of the directors of acquisition career management.

Based on the review, the following are unchanged for FY 2016:

- T&E experience requirement.
- T&E training requirements.
- T&E education requirements.

I am approving the following updates to the FY 2016 curriculum as outlined in the attachments:

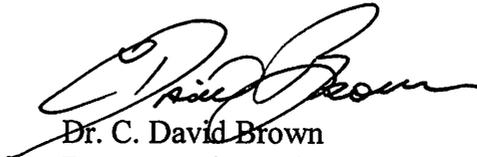
- Updated T&E PCD (Attachment 1). A tracked changes version of the document will be provided to DAU by separate correspondence.
- Updated T&E Certification Guides for T&E Level I, Level II, and Level III for the DAU Website on the Defense Acquisition Portal T&E Gateway (Attachment 2). A tracked changes version of the document will be provided to DAU by separate correspondence.

- DoD T&E Workforce Competency Model (Attachment 3).
- Changes to each of the TST 102, TST 204, and TST 303 courses (Attachment 4).

If the changes identified above are implemented for the T&E courses starting in FY 2016, I certify the T&E career field as current, technically accurate, and consistent with DoD acquisition policy. If the changes cannot be completed by then, please coordinate with the points of contact below regarding your plan of action for execution.

During the upcoming year, if DoD policies change or the required capabilities of acquisition workforce members change, I or my representative will advise DAU so that appropriate actions may be initiated to ensure the continued development of a professional, agile, and motivated workforce that consistently makes smart business decisions, acts in an ethical manner, and delivers timely and affordable capabilities to the Warfighter.

My points of contact regarding this certification are Mr. Thomas Simms, thomas.w.simms2.civ@mail.mil, 703-697-4812, and Mr. Terry Murphy, terry.a.murphy.civ@mail.mil, 571-256-4577.



Dr. C. David Brown
Deputy Assistant Secretary of Defense for
Developmental Test and Evaluation

Attachments:
As stated

AT&L Workforce Position Category Description (PCD)

Career Field: Test and Evaluation
Career Path: Not Uniquely Specified
Short Title: T&E
Category Code: T **Ref:** (a) DoDD 5000.52 dtd 12 Jan 2005
Date Approved: 11 Jun 2015 (b) DoDI 5000.66 dtd 21 Dec 2005
Last Reviewed: 11 Jun 2015 (c) DoD Desk Guide for AT&L Workforce Career Management dtd 10 Jan 2006

Notes:

1. This PCD is intended to assist in determining which AT&L career field/path to assign to an AT&L position per Title 10 sec. 1721. If 50% or more of the duties and responsibilities of the position match the "General Acquisition-Related Duties" described below **AND** the preponderance of those duties matches the "AT&L Career Field/Path Specific Duties" described below, assign the position to this position category.
2. All acquisition positions require management attention with respect to certification requirements and individual development. See Reference (c).
3. Critical Acquisition Positions (CAPs) are a subset of acquisition positions and Key Leadership Positions (KLPs) are a subset of CAPs. Both CAPs and KLPs represent positions with responsibility and authority that are critical to the success of a program or effort. These positions require management attention with respect to Acquisition Corps membership, tenure, and other specific statutory requirements. See Reference (c).

General Acquisition-Related Duties: The conceptualization, initiation, design, development, test, contracting, production, deployment, logistical support, modification, and disposal of weapons and other systems, supplies, or services (including construction) to satisfy DoD needs, intended for use in, or in support of, military missions.

AT&L Career Field/Path Specific Duties:

- Serve as Chief Developmental Tester for MDAP or MAIS.
- Serve as the Chair, T&E Working-level Integrated Product Team (T&E WIPT), or member representing the materiel developer, tester, and/or system evaluator.
- Analyze requirements/capabilities documents to determine operational relevance, achievability, testability, and measurability.
- Plan, organize, manage, or conduct test and/or evaluation associated with concepts, emerging technologies, and experiments as well as prototypes; new, fielded, or modified C4ISR systems (including IT systems participating in system-of-systems (SoS) and net-centric services); weapon or automated information systems; equipment or materiel throughout all acquisition phases to include developmental tests, and support to in-service tests and operational tests.
- Determine scope, infrastructure, resources, and data sample size to ensure system requirements are adequately demonstrated; analyze, assess, and evaluate test data/results; prepare reports of system performance and T&E findings.
- Develop T&E processes; modify, adapt, tailor, or extend standard T&E guides, precedents, criteria, methods, and techniques, to include scientific test and analyses techniques, M&S, cybersecurity T&E, interoperability, and certification.
- Design and use existing or new test equipment, procedures, and approaches.
- Write, edit, and staff a T&E Master Plan (TEMP), as well as system-level and/or individual element test plans.
- Conduct developmental T&E and support operational tests, and evaluate and/or analyze test results and/or test data; and prepare and present evaluation/assessment results.
- Categorize test data, equipment, materiel, or system deficiencies and certify readiness for OT&E.

Typical Line and Staff Position Titles: Chief Developmental Tester; Chair, T&E Working-level IPT; Assistant PEO for T&E; Assistant PM for T&E; Lead Test Engineer; Lead Experimentation Engineer; Chief Test Engineer; Chief Test Pilot; Test Director/Manager; Test Engineer; Acquisition T&E Department Head; Director, Flight Test Engineering; Test and Experimentation Design Branch Head; T&E Department Head; Capability Test Team Chair; Portfolio Manager; Chief Test Officer; Test Officer; T&E Analyst; Lead Simulator Engineer.

Typical Position Locations: Lead Developmental Test and Evaluation Organization, Service and Defense Agency test centers, major range and test facility base (MRTFB) test facilities, warfare centers, system centers, laboratories, as well as OSD/Service/HQ staff elements, field activities, and acquisition organizations within the Service components (e.g., Systems Commands, Materiel Commands, DRPMs, PEOs, and PM Offices).

Typical Career Codes:

Civilian Personnel		Uniformed Personnel						
OCC Series		Army AOC	Navy AQD	Air Force AFSC		Marine Corps MOS		
04xx	15xx	51A	ATx	11XX	61XX	8057	8820	8848
08xx	2210	51T		12XX	62EX	8058	8824	8852
13xx				13XX	63AX	8059	8846	8858
				17DX			8061	

Recommended Changes/Updates: Forward to Director, Learning Capabilities Integration Center (Attn: Dir, Academic Programs), Defense Acquisition University, 9820 Belvoir Road, Suite 3, Fort Belvoir, VA 22060-5565 or call 703-805-4090.

Level I Certification Guide

Type of Assignment	Representative Activities
Headquarters and Staff (OSD, JS, COCOMs, JITC, SYSCOMS, etc.)	<ul style="list-style-type: none"> ▶ Supports research and development of T&E policy, practices, metrics, and procedures. ▶ Supports development of evaluation methodology and framework. ▶ Supports identification of T&E direction and guidance applicable to the Service/agency. ▶ Supports program's T&E office representative at T&E meetings and other forums. ▶ Supports tracking/auditing of the T&E aspects of products/systems in the acquisition process. ▶ Reviews T&E strategies, test and evaluation master plans (TEMPs), test concepts, and test plans. ▶ Supports development of the T&E career management plan for recruiting, training, and retaining a professional T&E workforce. ▶ Supports development and execution of T&E processes, standards, methods, and techniques.
Program Management and Matrix Support	<ul style="list-style-type: none"> ▶ Supports the program's T&E Working-level IPT. ▶ Member of Chief Developmental Tester's team. ▶ Supports development of program's T&E strategy, approach, process, schedule, and resource requirements. ▶ Supports coordination of cybersecurity T&E IAW the DoD Risk Management Framework process. ▶ Supports implementation of an evaluation methodology and framework for product/system under test. ▶ Supports development of T&E materials/data for technical and progress reviews, to include risk assessment. ▶ Supports identification and coordination of T&E personnel and financial resource requirements. ▶ Proposes and reviews test concepts and test plans.
Range/Lab/Field Supporting Activities	<ul style="list-style-type: none"> ▶ Supports identification and scheduling of T&E resources to include workforce, infrastructure, and budgets to support testing at the respective facility. ▶ Reviews facility T&E tools (IT, video, targets, simulators, stimulators, instrumentation, etc.) and clearly understands their capabilities. ▶ Supports facility test plan development. ▶ Supports development of T&E plans and mitigation of safety risks for test plans during test execution. ▶ Assists in test execution, data collection, analysis, and reporting. ▶ Assists in evaluation, analysis, and reporting of test results. ▶ Supports implementation of new T&E techniques, lessons learned, and T&E best practices. ▶ Supports maintenance of the physical facility and environment, and coordination of renovations and repairs as necessary. ▶ Assists in execution of Service/agency or DoD cybersecurity and system assurance (SA) testing.

Core Certification Standards (Required for DAWIA certification)

Acquisition Training	<ul style="list-style-type: none"> ▶ ACQ 101 Fundamentals of Systems Acquisition Management
Functional Training	<ul style="list-style-type: none"> ▶ CLE 023 Modeling and Simulation for Test and Evaluation ▶ CLE 025 Information Assurance (IA) ▶ SYS 101 Fundamentals of Systems Planning, Research, Development, and Engineering ▶ TST 102 Fundamentals of Test and Evaluation
Education	<ul style="list-style-type: none"> ▶ Associate's degree in any discipline
Experience	<ul style="list-style-type: none"> ▶ 1 year of T&E experience

Core Plus Development Guide
(Desired training, education, and experience)

Type of Assignment

Training	HQ and Staff	PM/Matrix Spt	Rg/Lab/Fld Spt Act
CLE 004 Introduction to Lean Enterprise Concepts	✓	✓	
IRM 101 Basic Information Systems Acquisition	✓	✓	✓
Education			
None specified			
Experience			
None specified			

Notes:

- 1** The Core Certification/Training Standards section lists the training and/or education and experience REQUIRED for certification at this level or training for this career path.
- 2** "(R)" following a course title indicates the course is delivered as resident-based instruction.
- 3** When preparing your IDP, you and your supervisor should consider the training, education, and experience listed in this Core Plus Development Guide if not already completed.
- 13** Some continuous learning (CL) modules have been created by extracting lessons in their entirety from a training course. If this is the case for the CL module(s) identified in the above Core Certification Standards, the course from which the CL module was extracted is identified in the "Notes" section of the CL course description and the course can be substituted to meet the certification standard.

Level II Certification Guide

Type of Assignment	Representative Activities
<p>Headquarters and Staff (OSD, JS, COCOMs, JITC, SYSCOMS, etc.)</p>	<ul style="list-style-type: none"> ▶ Interprets research and development of T&E strategy, policy, practices, metrics, and procedures and implements direction and guidance. ▶ Proposes development of evaluation methodology and framework. ▶ Proposes identification of T&E direction and guidance applicable to the Service/agency. ▶ Serves as or supports the program's T&E office representative at T&E meetings and other forums. ▶ Manages tracking/auditing of the T&E aspects of products/systems in the acquisition process and identifies T&E issues. ▶ Develops and coordinates T&E strategies, test and evaluation master plans (TEMPs), test concepts, and test plans. ▶ Proposes approaches for development of the T&E career management plan for recruiting, training, and retaining a professional T&E workforce. ▶ Proposes development and execution of T&E processes, standards, methods, and techniques.
<p>Program Management and Matrix Support</p>	<ul style="list-style-type: none"> ▶ Member of the program's T&E Working-level IPT. ▶ Drafts and coordinates an evaluation methodology and framework for product/system under test. ▶ Member of the Chief Developmental Tester's team drafting and coordinating the TEMP. ▶ Directs coordination of cybersecurity T&E IAW the DoD Risk Management Framework process. ▶ Directs development of program's T&E approach, process, schedule, and resource requirements. ▶ Develops and coordinates T&E materials/data for technical and progress reviews, to include risk assessment. ▶ Identifies and coordinates T&E personnel and financial resources requirements. ▶ Develops guidance on test concepts and test plans.
<p>Range/Lab/Field Supporting Activities</p>	<ul style="list-style-type: none"> ▶ Identifies and schedules T&E resources to include workforce, infrastructure, and budgets to support testing at the respective facility. ▶ Recommends facility T&E tools (IT, video, targets, simulators, stimulators, instrumentation, etc.) that are capable of supporting T&E. ▶ Leads facility test plan development and coordination. ▶ Ensures technical adequacy of T&E plans and mitigation of safety risks for test plans and during test execution. ▶ Leads test execution, data collection, analysis, and reporting. ▶ Proposes needed maintenance of the physical facility and environment, and coordination of renovations and repairs as necessary. ▶ Manages implementation of Service/agency or DoD cybersecurity and system assurance (SA) policies. ▶ Leads evaluation, analysis, and reporting of test results. ▶ Identifies new T&E techniques, lessons learned, and T&E best practices.

Core Certification Standards (Required for DAWIA certification)

<p>Acquisition Training</p>	<ul style="list-style-type: none"> ▶ ACQ 202 Intermediate Systems Acquisition, Part A ▶ ACQ 203 Intermediate Systems Acquisition, Part B (R)
<p>Functional Training</p>	<ul style="list-style-type: none"> ▶ CLE 003 Technical Reviews ▶ CLE 029 Testing In a Joint Environment ▶ CLE 035 Introduction to Probability and Statistics ▶ CLE 301 Reliability and Maintainability ▶ CLM 013 Work-Breakdown Structure ▶ CLM 016 Cost Estimating ▶ CLR 101 Introduction to the Joint Capabilities Integration & Development System ▶ SYS 202 Intermediate Systems Planning, Research, Development, and Engineering, Part I ▶ TST 204 Intermediate Test and Evaluation (R) ▶ Effective 1 January 2015, the requirement will also include: ▶ CLE 030 Integrated Testing

Education	▶ Baccalaureate degree or higher (any field of study) ▶ A total of 24 semester hours or equivalent in technical or scientific courses such as mathematics (e.g., calculus, probability, statistics), physical sciences (e.g., chemistry, biology, physics), psychology, operations research/systems analysis, engineering, computer science, and information technology.
Experience	▶ 2 years of T&E experience

Core Plus Development Guide (Desired training, education, and experience)	Type of Assignment		
Training	HQ and Staff	PM/Matrix Spt	Rg/Lab/Fld Spt Act
CLB 007 Cost Analysis	✔	✔	✔
CLE 015 Continuous Process Improvement Familiarization	✔	✔	✔
CLE 017 Technical Planning	✔	✔	✔
CLE 021 Technology Readiness Assessments	✔	✔	✔
CLE 037 Telemetry			✔
CLE 038 Time Space-Position Information			✔
CLE 039 Environmental Issues in Testing and Evaluation	✔	✔	✔
CLE 060 Practical Software and Systems Measurement	✔	✔	
CLM 013 Work-Breakdown Structure	✔	✔	
CLM 016 Cost Estimating	✔	✔	✔
CLM 017 Risk Management	✔	✔	✔
CLM 035 Environmental Safety and Occupational Health— Lesson from PMT 352A	✔	✔	✔
CLV 016 Introduction to Earned Value Management	✔	✔	
IRM 202 Intermediate Information Systems Acquisition (R)	✔	✔	✔
LOG 101 Acquisition Logistics Fundamentals	✔	✔	✔
LOG 103 Reliability, Availability, and Maintainability (RAM)	✔	✔	✔
PQM 101 Production, Quality, and Manufacturing Fundamentals		✔	✔
SPS 106 Database Maintenance	✔	✔	
Education			
▶ None specified			
Experience			
▶ At least 1 year of field hands-on T&E activities			

Notes:

- 1** The Core Certification/Training Standards section lists the training and/or education and experience REQUIRED for certification at this level or training for this career path.
- 2** "(R)" following a course title indicates the course is delivered as resident-based instruction.
- 5** When preparing your IDP, you and your supervisor should consider the training, education, and experience listed in the Core Plus Development Guide at this and the lower level(s) if not already completed.

Level III Certification Guide

Type of Assignment	Representative Activities
<p>Headquarters and Staff (OSD, JS, COCOMs, JITC, SYSCOMS, etc.)</p>	<ul style="list-style-type: none"> ▶ Manages identification, development, and implementation of T&E strategy, policy, practices, and procedures. ▶ Manages development of evaluation methodology and framework. ▶ Manages identification of T&E direction and guidance applicable to the Service/agency. ▶ Serves as the program's principal T&E office representative at T&E meetings and other forums. ▶ Directs/manages tracking/auditing of T&E aspects of products/systems in the acquisition process, identifies T&E issues, and recommends corrective actions as necessary. ▶ Manages development of the T&E career management plan for recruiting, training, and retaining a professional T&E workforce. ▶ Approves T&E strategies, test and evaluation master plans (TEMPs), test concepts, and test plans and certifies annual T&E budgets. ▶ Manages development and execution of T&E processes, standards, methods, and techniques.
<p>Program Management and Matrix Support</p>	<ul style="list-style-type: none"> ▶ Includes the Chief Developmental Tester for MDAPs and MAIS programs. ▶ Chairs or serves as a key member of the program's T&E Working-level IPT. ▶ Manages TEMP development and secures final approvals. ▶ Manages development of program's T&E approach, process, schedule, and resource requirements. ▶ Manages development of T&E materials/data for technical and progress reviews, to include risk assessment. ▶ Manages T&E personnel and financial resources requirements. ▶ Directs test concepts and test plans and submits annual T&E budgets. ▶ Directs cybersecurity T&E IAW the DoD Risk Management Framework process. ▶ Directs/manages development and/or implementation of an evaluation methodology and framework for product/system under test.
<p>Range/Lab/Field Supporting Activities</p>	<ul style="list-style-type: none"> ▶ Manages identification and scheduling of T&E resources to include workforce, infrastructure, and budgets to support testing at the respective facility. ▶ Ensures facility T&E tools (IT, video, targets, simulators, stimulators, instrumentation, etc.) are capable of supporting T&E. ▶ Directs/manages facility test plan development, coordination, and approval. ▶ Directs/manages technical and safety reviews of test plans. ▶ Directs/manages test execution, data collection, data management, and data analysis. ▶ Directs/manages evaluation, analysis, and reporting of test results. ▶ Directs/manages development of new T&E techniques, capture of lessons learned, and development of T&E best practices. ▶ Manages maintenance of the physical facility and environment, and coordination of renovations and repairs as necessary. ▶ Oversees implementation of Service/Agency or DoD cybersecurity and system assurance (SA) policies applicable to test facility.

Core Certification Standards (Required for DAWIA certification)

<p>Acquisition Training</p>	<ul style="list-style-type: none"> ▶ Acquisition Training identified at level II must have been completed
<p>Functional Training</p>	<ul style="list-style-type: none"> ▶ Functional Training identified at level II must have been completed ▶ CLB 008 Program Execution ▶ CLB 009 Planning, Programming, Budgeting, and Execution and Budget Exhibits ▶ CLL 015 Product Support Business Case Analysis (BCA) ▶ CLM 014 IPT Management and Leadership ▶ CLM 031 Improved Statement of Work ▶ CLV 016 Introduction to Earned Value Management ▶ TST 303 Advanced Test and Evaluation (R)

Education	▶ Baccalaureate or graduate degree in a technical or scientific field such as engineering, physics, chemistry, biology, mathematics, operations research, engineering management, or computer science.
Experience	▶ 4 years of T&E experience

Core Plus Development Guide (Desired training, education, and experience)	Type of Assignment		
Training	HQ and Staff	PM/Matrix Spt	Rg/Lab/Fld Spt Act
CLC 011 Contracting for the Rest of Us	✔	✔	
CLE 009 ESOH in Systems Engineering	✔	✔	✔
CLE 066 Systems Engineering for Systems of Systems	✔	✔	✔
CLL 012 Supportability Analysis	✔	✔	✔
CLM 032 Evolutionary Acquisition	✔	✔	
CLR 151 Analysis of Alternatives	✔	✔	
CLR 250 Capabilities-Based Assessment	✔	✔	
HBS 409 Decision Making	✔	✔	✔
HBS 427 Meeting Management	✔	✔	✔
HBS 441 Team Management	✔	✔	✔
PMT 251 Program Management Tools Course, Part I	✔	✔	
PMT 257 Program Management Tools Course, Part II	✔	✔	✔
SYS 203 Intermediate Systems Planning, Research, Development, and Engineering, Part II (R)	✔	✔	✔
Education			
▶ None specified			
Experience			
▶ At least 2 years of field hands-on T&E activities			

Notes:

1 The Core Certification/Training Standards section lists the training and/or education and experience REQUIRED for certification at this level or training for this career path.

2 "(R)" following a course title indicates the course is delivered as resident-based instruction.

5 When preparing your IDP, you and your supervisor should consider the training, education, and experience listed in the Core Plus Development Guide at this and the lower level(s) if not already completed.

DOD T&E Workforce Competency Model (June 2, 2015)

Units of Competence	Competencies	Competency Elements
Planning	Competency 1. Risk Identification	Element 1. Identify T&E risk factors (e.g., lack of available time, money, test articles/platforms, new technology, test expertise, external SMEs, test facilities, product maturity that includes hardware/ software) based upon likelihood and consequence of occurrence to test strategy/approach and impact to the overall program plan and schedule along with mitigation recommendations.
		Element 2. Develop risk mitigation for T&E risk factors in accordance with the processes and procedures found in the Department of Defense Risk Management Guide to cover system risk elements throughout the test program.
		Element 3. Support Program Management Office's development of a risk management plan with T&E relevant risks and mitigation plans that enable a balanced plan for a program.
	Competency 2. Capabilities Assessment	Element 4. Translate requirements documents (e.g. Technology Development Strategy, Initial Capabilities Document, Capability Development Document, Capability Production Document, Program Protection Plan, Information Assurance Strategy, Information Support Plan, System Threat Assessment Report, Environmental, Safety and Occupational Health and concept of employment/operation) to identify evaluation criteria to support T&E planning efforts.
		Element 5. Assess whether the capability requirements are well defined so as to measure in test and are relevant to the operational mission.
		Element 6. Determine data requirements to assess evaluation criteria for assessing the system performance requirements, (e.g. identify Critical Technical Parameters, software maturity levels, Measures of Effectiveness, Measures of Suitability) to support evaluation of Critical Operational Issues, Key Performance Parameters, and Key System Attributes.
		Element 7. Determine necessary T&E infrastructure requirements (people/ knowledge, cybersecurity teams, funding, investments, budgets, T&E processes, facilities/ranges, cyber ranges, instrumentation and associated support, Software Systems Integration Labs, Modeling & Simulation) and identify shortfalls that will require investments to meet T&E infrastructure sufficiency.
	Competency 3. Program T&E Strategy Development	Element 8. Incorporate all policies, practices and procedures with the technical requirements of a program to develop and document a T&E strategy that supports the program's acquisition strategy. Utilize the full spectrum of the integrated testing process in the T&E strategy. Identify how the following components fit together during systems development: CT, DT, OT, and LFT. Identify where environmental, interoperability, cybersecurity, and mission-level testing should fit into system development. Determine the appropriate criteria for evaluating OT parameters (Effectiveness, Suitability, and Survivability) and LFT&E parameters (Lethality and Vulnerability).

Units of Competence	Competencies	Competency Elements
		<p>Element 9. Develop and document the test and evaluation strategy that integrates policy, program requirements, cost and resource estimates, evaluation framework and the T&E schedule to accomplish program goals. Use appropriate contracting strategies to maximize the efficient use of human capital and other resources.</p> <p>Element 10. Identify all organizations and activities that have roles and responsibilities in providing for or overseeing the T&E strategy that supports a program's acquisition life cycle or a system-of-systems' acquisition life cycle.</p> <p>Element 11. Identify and organize the T&E management forum (e.g., T&E Working-level Integrated Product Team, Integrated Test Team, Combined Test Team) necessary to address all the T&E issues and documentation to support the test and evaluation strategy, approach, and the overall program plan.</p> <p>Element 12. Translate the T&E strategy into the appropriate test document (e.g., Test and Evaluation Master Plan (TEMP), Developmental Test Plans, Operational Test Plans, and Live Fire Test Plans) including identification of all the required resources to ensure the strategy is executable and supports the systems engineering plan and overall Acquisition Strategy.</p>
	Competency 4. Test Cost Estimating	<p>Element 13. Provide financial cost estimates for T&E support to ensure T&E resources are available during development and production of the system lifecycle.</p>
	Competency 5. Coordination of T&E Activities and Events	<p>Element 14. Interact with all organization/activities that require information/ activity exchange to successfully complete the test planning as enumerated in the T&E strategy contained in the Test and Evaluation Master Plan.</p> <p>Element 15. Continually coordinate and monitor availability of required test and/or evaluation resources to identify any potential resource problem/issue (e.g., troop deployment, range closure, required test configurations may slip, environmental certifications, requisite authorities to test/operate, blue team / red team availability) to ensure effective completion of test events. Determine how to protect the integrity of test data.</p> <p>Element 16. Execute tasking orders and funding streams to commit resources as requested, when and where required to complete T&E activities/event.</p>
	Competency 6. Test Readiness	<p>Element 17. Verify readiness of resources (e.g., facilities, trained operators, maintainers, externally acquired test teams (e.g. red, blue, etc.), and testers, properly configured test products/software/systems/platforms and instrumentation) for T&E program execution.</p> <p>Element 18. Ensure all required resources are deployed to the test site(s) as required and in sufficient time to provide for pre-test rehearsal(s), communications, and instrumentation checks.</p> <p>Element 19. Comply with and implement policies and procedures (e.g., safety, security, environmental) required to successfully conduct test activity/event. Investigate specific policies, procedures, and operational constraints for applicable test ranges to ensure compatibility during test operations.</p>

Units of Competence	Competencies	Competency Elements
		<p>Element 20. Assess all T&E related factors (resources and product maturity including hardware/software) to determine system/test article readiness (e.g. Developmental Test Readiness Reviews, DT&E Assessments, Operational Test Readiness Reviews, Live Fire Test Readiness Reviews) before the starting the test. Ensure adequate personnel are assigned to allow continual coverage for overlapping test events.</p>
		<p>Element 21. Plan, conduct, and report on Test Readiness Reviews.</p>
Test Execution	Competency 7. Risk Management	<p>Element 22. Manage test execution/risk mitigation factors (e.g. safety, schedule, resources, fault isolation and program priority) by adapting to real-time changes/challenges to advise Test Director in order to optimize test opportunity and coverage of key parameters/factors/conditions that have significant effect on operational performance.</p>
	Competency 8. Test Control Management	<p>Element 23. Confirm data collection tools are valid, operators and maintainers are trained, Modeling and Simulation/Live Virtual Constructive (LVC) hardware and software tools are properly integrated, and system under test is configured as required to execute the test events/activities and collect required data.</p>
		<p>Element 24. Confirm and monitor security and safety compliance (such as people and item/system under test) and environmental requirements constraints to protect resources and comply with established policies.</p>
		<p>Element 25. Develop, validate, rehearse, and execute tests in an organized fashion to facilitate identification of completed data suitable in form and format for analysis and evaluation.</p>
	Competency 9. Data Management	<p>Element 26. Control the test schedule to complete scenarios and scripts within boundaries of test plan and to optimize collection of data to support evaluation objectives.</p>
		<p>Element 27. Verify all required and expected Raw Test Data (i.e. forms, electronic tapes, sensors, etc.) are secure, collected, documented and archived along with descriptions of data to assure completeness of data collected.</p>
<p>Element 28. Ensure validity of collected test data to meet test objectives in support of planned analysis and evaluation. Determine how cybersecurity will be used to protect the integrity of test data.</p>		
<p>Element 29. Distribute data per the data management plan for analysis of test results in support of the evaluation.</p>		
Analysis	Competency 10. Data Verification and Validation	<p>Element 30. Translate outputs from test instrumentation systems, data acquisition system methods and formats, capabilities and operation to verify and validate test data set.</p>
	Competency 11. Data Reduction and Assimilation	<p>Element 31. Identify gaps and variances in raw test data to determine data voids or outliers that may degrade analysis and evaluation.</p>
		<p>Element 32. Reduce, translate and analyze raw test data into organized and meaningful data products to support planned analysis, evaluation, and reporting.</p>
		<p>Element 33. Conduct data scoring to refine demonstrated test results (i.e. fly out, models, Reliability, Availability and Maintainability scoring conferences) to establish a complete data set of system, to include software performance.</p>
<p>Element 34. Align data to support specific test objectives in support of the planned analysis in support of the overall evaluation.</p>		

Units of Competence	Competencies	Competency Elements
Evaluation	Competency 12. Determination of Test Adequacy	<p>Element 35. Confirm that the tests conducted support the stated test objectives (i.e. does the product satisfy system requirements) to ensure adequacy of the planned analysis and evaluation. Determine appropriate analysis and evaluation techniques to be incorporated in a system evaluation or a system-of-systems' evaluation.</p> <p>Element 36. Confirm that modeling and simulation met test objectives so as to augment test data and ensure adequacy of evaluation. Identify how accredited modeling and simulation (including the V&V process) should be used to supplement live test data.</p>
	Competency 13. Validation of Test Results	<p>Element 37. Determine if the collected data are sufficient to accurately and completely support established measurability metrics (e.g. effectiveness, suitability, survivability, etc.).</p> <p>Element 38. Determine if the data collected via modeling and simulation tools are sufficient to adequately supplement data collected during live T&E to facilitate a credible evaluation of the system's (or system-of-systems') realistic survivability and lethality under combat conditions.</p>
	Competency 14. Evaluative Conclusions	<p>Element 39. Confirm that the collected test data can sufficiently and accurately support the evaluation framework in the approved Test & Evaluation Master Plan.</p>
		<p>Element 40. Relate test results and evaluation conclusions to performance specification and performance results to report on operational significance.</p>
		<p>Element 41. Assess how hardware/software components are brought together to function properly as required in capability documents and what its performance brings to the larger System of Systems designed to achieve required capability.</p>
	Reporting	Competency 15. Technical Reviews
Competency 16. Lessons Learned		<p>Element 43. Assess and document lessons learned on conduct of test data collection, analysis, and evaluation processes to ensure constant improvement of methods and processes.</p>
		<p>Element 44. Apply and/or adapt previous lessons learned from similar test activities/events.</p>
Competency 17. Documentation	<p>Element 45. Provide the required programmatic T&E reports and/or presentation (such as quick look analysis, test reports, analysis reports and evaluation reports) to capture test background, methodology, limitations, results, evaluation, and recommendations to support decision making.</p> <p>Element 46. Archive the data throughout the T&E planning, preparation T&E execution, analysis and evaluation phases to support future T&E efforts.</p>	
Professional	Competency 18. Customer Service	<p>Element 47. Anticipate and support the needs of both internal and external customers of the acquisition community.</p>
		<p>Element 48. Deliver high quality T&E products/services and commit to continuous improvement.</p>
	Competency 19. External Awareness	<p>Element 49. Maintain currency on local, national and international T&E policies and trends that might affect the Department of Defense T&E acquisition community and associated stakeholders.</p> <p>Element 50. Assess T&E impact on the external environment (e.g. social, political, economic) and end user.</p>

Units of Competence	Competencies	Competency Elements
		Element 51. Remain actively involved and partner with other elements in the acquisition process (e.g., systems engineering, information assurance).
	Competency 20. Flexibility	Element 52. Respond to changes and new information and rapidly adapt to changing circumstances impacting the test and evaluation strategy, approach, and overall plan.
	Competency 21. Communication	Element 53. Listen effectively and clarify information as needed.
		Element 54. Make clear and convincing oral presentations of technical data, analysis, and evaluation for the intended audience.
		Element 55. Write in a clear, concise, organized, and convincing manner for the intended audience.
	Competency 22. Technical Credibility	Element 56. Apply, and/or convey T&E principles, procedures, requirements, regulations, and policies related to specialized technical competencies and or needed by program decision-makers.
		Element 57. Pursue self-development to advance technical and management skill sets and prepare for future advancement and changing technologies.
		Element 58. Maintain currency of technical knowledge, skills, and certifications.
	Competency 23. Critical Thinking	Element 59. Independently and objectively anticipate, identify, analyze challenges/problems, weighing relevance and accuracy of information to affect solutions.
		Element 60. Generate and evaluate alternative T&E strategies and solutions.
	Competency 24. Professional Ethics	Element 61. Provide unbiased T&E results, analysis, and evaluation.
		Element 62. Exhibit personal conduct in accordance with Department of Defense ethical standards.
	Competency 25. Leadership and Management	Element 63. Hold self and others accountable for measurable, high quality, timely, and cost effective data, and unbiased test and evaluation results.
		Element 64. Determine objectives, sets priorities, delegates work to the right person/group, and monitors progress.
		Element 65. Accept responsibility for his/her team mistakes and shortfalls.
		Element 66. Make well-informed, effective and timely decisions, even when data are limited or solutions produce negative consequences.
		Element 67. Anticipate and articulate implications of decisions, test, and evaluation results.
		Element 68. Inspire and foster team building and partnering.
Element 69. Provide the vision and strategic thinking and planning necessary to ensure all the necessary resources are leveraged to the extent possible and available when needed.		

DAU T&E Curriculum Updates FY 2016

An overview of required T&E curriculum updates is provided below. A detailed comment resolution matrix for each T&E course (TST 102, TST 204, and TST 303) was provided to the DAU T&E Performance Learning Director. DASD(DT&E) will continue to coordinate with DAU to assist in the implementation of the following updates.

TST 102

- Update based on DoD Instruction (DoDI) 5000.02
- Include initial discussion on Developmental Evaluation Framework

TST 204

- Update based on DoDI 5000.02
- Update Developmental Evaluation Methodology and Framework
- Update T&E resource lesson to include Test Resource Management Center video
- Update Cybersecurity T&E based on PM Cybersecurity Guidebook

TST 303

- Update based on DoDI 5000.02
- Develop cybersecurity T&E lesson (critical thinking)
- Update Reliability Growth Planning lesson, with more critical thinking
- Update T&E Strategy discussions to include Developmental Evaluation Methodology and Framework

Level I Certification Guide

Type of Assignment	Representative Activities
Headquarters and Staff (OSD, JS, COCOMs, JITC, SYSCOMS, etc.)	<ul style="list-style-type: none"> Supports research and development of T&E policy, practices, metrics, and procedures. Supports development of evaluation methodology and framework. Supports the identification, of T&E direction, and guidance applicable to the Service/agency involvement in T&E. Supports program's T&E office representative to at T&E meetings and other forums. Supports tracking/auditing of the T&E aspects of products/systems in the acquisition process. Reviews test and evaluation T&E strategies, test and evaluation master plans (TEMPS), test concepts, and test plans. Supports development of the T&E career management plan for recruiting, training, and retaining a professional T&E workforce. Supports development and execution of T&E processes, standards, methods, and techniques.
Program Management and Matrix Support	<ul style="list-style-type: none"> Supports the program's T&E working Working-level IPT. Member of Chief Developmental Tester's team. developing a test and evaluation master plan (TEMP). Supports development of program's test and evaluation T&E strategy, approach, process, schedule, and resource requirements. Supports coordination of cybersecurity test and evaluation T&E IAW the DoD Risk Management Framework Process. Supports implementation of an evaluation methodology and framework relative to for product/system under test. Supports development of T&E documentation and materials/data for technical and progress reviews, to include risk assessment. Supports identification and coordination of T&E personnel and financial resource requirements. Proposes and reviews test concepts and test plans.
Range/Lab/Field Supporting Activities	<ul style="list-style-type: none"> Supports identification, process, and scheduling for of T&E resources to include: work force, infrastructure, and budgets to support testing as expected for at the respective facility. Reviews facility test and evaluation T&E tools (IT, video, targets, simulators, stimulators, instrumentation, etc.) and clearly understands their capabilities. Supports facility test plan development. Supports the development of T&E plans, and the mitigation of safety risks for test plans during test execution. Assists in test execution, data collection, analysis, and reporting. Assists in the evaluation, analysis, and reporting of test results. Supports the implementation of new T&E techniques, lessons learned, and T&E best practices. Supports the maintenance of the physical facility, and environment, and coordination of renovations and repairs as necessary. Assists in the execution of Service/agency or DoD Cybersecurity and System Assurance (SA) testing.

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Core Certification Standards (Required for DAWIA certification)

Acquisition Training	<ul style="list-style-type: none"> ACQ 101 Fundamentals of Systems Acquisition Management
Functional Training	<ul style="list-style-type: none"> CLE 023 Modeling and Simulation for Test and Evaluation CLE 025 Information Assurance (IA) SYS 101 Fundamentals of Systems Planning, Research, Development, and Engineering TST 102 Fundamentals of Test and Evaluation
Education	<ul style="list-style-type: none"> Associate's degree in any discipline
Experience	<ul style="list-style-type: none"> 1 year of test and evaluation T&E experience

Core Plus Development Guide (Desired training, education, and experience)	Type of Assignment		
	HQ and Staff	PM/Matrix Spt	Rg/Lab/Fld Spt Act
Training			
CLE 004 Introduction to Lean Enterprise Concepts	✓	✓	
IRM 101 Basic Information Systems Acquisition	✓	✓	✓
Education			
▶ None specified			
Experience			
▶ None specified			

Notes:

- 1** The Core Certification/Training Standards section lists the training and/or, education, and experience REQUIRED for certification at this level or training for this career path.
- 2** "(R)" following a course title indicates the course is delivered as resident-based instruction.
- 3** When preparing your IDP, you and your supervisor should consider the training, education, and experience listed in this Core Plus Development Guide if not already completed.
- 13** Some continuous learning (CL) modules have been created by extracting lessons in their entirety from a training course. If this is the case for the CL module(s) identified in the above Core Certification Standards, the course from which the CL module was extracted is identified in the "Notes" section of the CL course description and the course can be substituted to meet the certification standard.

Feature - Test & Evaluation Certification Guide Level II

Level I | **Level II** | Level III

Level II Certification Guide

Type of Assignment	Representative Activities
Headquarters and Staff (OSD, JS, COCOMs, JITC, SYSCOMS, etc.)	<ul style="list-style-type: none"> Supports-Interprets research and development of test and evaluationT&E strategy, policy, practices, metrics, and procedures, and implementation-implements direction and guidance. Supports-Proposes development of evaluation methodology and framework. Supports-Proposes the identification- of T&E direction and guidance applicable to the Service/agency, headquarters- Serves as or supports the program's T&E office representative at T&E meetings and other forums. Manages tracking/auditing of the T&E aspects of products/systems in the acquisition process and identifies T&E issues. Develops and Coordinates-coordinates test and evaluationT&E strategies, test and evaluation master plans (TEMPS), test concepts, and test plans, -as well as certifying annual T&E budgets. Supports-Proposes approaches for the development of the T&E career management plan for recruiting, training, and retaining a professional T&E workforce. Supports-Proposes development and execution of T&E processes, standards, methods, and techniques.
Program Management and Matrix Support	<ul style="list-style-type: none"> Member of the program's T&E workingWorking-level IPT. Directs/manages development and/or implementation of Drafts and coordinates an evaluation methodology and framework relative to for product/system under test. Member of the Chief Developmental Tester's team Drafts and coordinatesdrafting and coordinating the test and evaluation master plan (TEMP). Directs coordination of cybersecurity test and evaluationT&E per-IAW the DoD Risk Management Framework Process. Directs/manages development of program's T&E approach, process, schedule, and resource requirements. Directs/manages development of Develops and coordinates T&E materials/data for technical and progress reviews, to include risk assessment. Identifies and coordinates T&E personnel and financial resources requirements. Provides-Develops guidance on test concepts and test plans, development and submits annual T&E budgets.
Range/Lab/Field Supporting Activities	<ul style="list-style-type: none"> Identifies and schedules facility resources forT&E resources to include: work-force, infrastructure, and budgets to support testing at the respective facility. Ensures- Recommends facility test and evaluationT&E tools (IT, video, targets, simulators, stimulators, instrumentation, etc.) that are capable of supporting T&E, -as expected for the respective facility. Leads facility test plan development and coordination. Ensures technical adequacy of T&E plans, and mitigation of safety risks for test plans and during test execution. Leads test execution, data collection, analysis, and reporting. Supports the Proposes needed maintenance of the physical facility, and environment, and coordination of renovations and repairs as necessary. Manages the implementation of Service/agency or DoD CybersecurityCybersecurity and System Assurance (SA) policies. Leads the evaluation, analysis, and reporting of test results. Identifies new T&E techniques, lessons learned, and T&E best practices.

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Core Certification Standards (Required for DAWIA certification)

Acquisition Training	<ul style="list-style-type: none"> ACQ 202 Intermediate Systems Acquisition, Part A ACQ 203 Intermediate Systems Acquisition, Part B (R)
Functional Training	<ul style="list-style-type: none"> CLE 003 Technical Reviews CLE 029 Testing In a Joint Environment CLE 035 Introduction to Probability and Statistics CLE 301 Reliability and Maintainability CLM 013 Work-Breakdown Structure CLM 016 Cost Estimation

	<ul style="list-style-type: none"> ▶ CLR 101 Introduction to the Joint Capabilities Integration & Development System ▶ SYS 202 Intermediate Systems Planning, Research, Development, and Engineering, Part 1 ▶ TST 204 Intermediate Test and Evaluation (R) ▶ Effective 1 January 2015, the requirement will also include: ▶ CLE 030 Integrated Testing
Education	<ul style="list-style-type: none"> ▶ Baccalaureate degree <u>of-or</u> higher (any field of study) ▶ A total of 24 semester hours or equivalent in technical or scientific courses such as mathematics (e.g., calculus, probability, statistics), physical sciences (e.g., chemistry, biology, physics), psychology, operations research/systems analysis, engineering, computer science, and information technology.
Experience	▶ 2 years of <u>test-and-evaluation</u> T&E experience

Core Plus Development Guide (Desired training, education, and experience)	Type of Assignment		
	HQ and Staff	PM/Matrix Spt	Rg/Lab/Fld Spt Act
CLB 007 Cost Analysis	✓	✓	✓
CLE 015 Continuous Process Improvement Familiarization	✓	✓	✓
CLE 017 Technical Planning	✓	✓	✓
CLE 021 Technology Readiness Assessments	✓	✓	✓
CLE 037 Telemetry			✓
CLE 038 Time Space-Position Information			✓
CLE 039 Environmental Issues in Testing and Evaluation	✓	✓	✓
CLE 060 Practical Software and Systems Measurement	✓	✓	
CLM 013 Work-Breakdown Structure	✓	✓	
CLM 016 Cost Estimating	✓	✓	✓
CLM 017 Risk Management	✓	✓	✓
CLM 035 Environmental Safety and Occupational Health—Lesson from PMT 352A	✓	✓	✓
CLV 016 Introduction to Earned Value Management	✓	✓	
IRM 202 Intermediate Information Systems Acquisition (R)	✓	✓	✓
LOG 101 Acquisition Logistics Fundamentals	✓	✓	✓
LOG 103 Reliability, Availability, and Maintainability (RAM)	✓	✓	✓
PQM 101 Production, Quality, and Manufacturing Fundamentals		✓	✓
SPS 106 Database Maintenance	✓	✓	
Education			
▶ None specified			
Experience			
▶ At least one -1 year of field hands-on T&E activities			

Notes:

- 1** The Core Certification/Training Standards section lists the training and/or education and experience REQUIRED for certification at this level or training for this career path.
- 2** "(R)" following a course title indicates the course is delivered as resident-based instruction.
- 5** When preparing your IDP, you and your supervisor should consider the training, education, and experience listed in the Core Plus Development Guide at this and the lower level(s) if not already completed.

Feature - Test & Evaluation Certification Guide Level III

Level I | Level II | **Level III**

Level III Certification Guide

Type of Assignment	Representative Activities
Headquarters and Staff (OSD, JS, COCOMs, JITC, SYSCOMS, etc.)	<ul style="list-style-type: none"> Manages the identification, development, and implementation of T&E strategy, policy, practices, and procedures. Manages development of evaluation methodology and framework. Supports/Manages identification, of T&E direction, and guidance applicable to the respective Service/agency. Represents/Serves as the program's principal T&E office representative at T&E meetings and other forums. Directs/manages tracking/auditing of the T&E aspects of products/systems in the acquisition process, identifies T&E issues, and recommends corrective actions as necessary. Manages development of the T&E career management plan for recruiting, training, and retaining a professional T&E workforce. Approves test and evaluation T&E strategies, test and evaluation master plans (TEMPs), test concepts, and test plans as well as and certifying-certifies annual T&E budgets. Manages the development and execution of T&E processes, standards, methods, and techniques.
Program Management and Matrix Support	<ul style="list-style-type: none"> Includes the Chief Developmental Tester for MDAPs and MAIS programs. Chairs or serves as a key member of the program's T&E working/Working-level IPT. Manages and the test and evaluation master plan (TEMP) development and securing secures final approvals. Directs/manages/Manages development of program's T&E approach, process, schedule, and resource requirements. Directs/manages/Manages development of T&E materials/data for technical and progress reviews, to include risk assessment. Identifies and coordinates/Manages T&E personnel and financial resources requirements. Provides guidance on Directs test concepts and test plans development and submits annual T&E budgets. Provides guidance on the Directs Cybersecurity test and evaluation T&E IAW per the DoD Risk Management Framework P process. Directs/manages development and/or implementation of an evaluation methodology and framework for product/system under test.
Range/Lab/Field Supporting Activities	<ul style="list-style-type: none"> Manages the identification, process, and schedule for of and scheduling of T&E resources, to include: work-force, infrastructure, and budgets to support testing at the respective facility. Ensures facility test and evaluation T&E tools (IT, video, targets, video, simulators, stimulators, instrumentation, etc.) are capable of supporting T&E. Directs/manages facility test plan development, coordination, and approval. Directs/manages technical and safety reviews of test plans. Directs/manages test execution, data collection, data management, and data analysis. Directs/manages evaluation, analysis, and reporting of test results. Directs/manages development of new T&E techniques, capture of lessons learned, and development of T&E best practices. Manages the maintenance of the physical facility, and environment, and coordination of renovations and repairs as necessary. Directs/manages Oversees the implementation of Service/Agency or DoD Cybersecurity and Ssystem Assurance (SA) policies applicable to test facility.

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Core Certification Standards (Required for DAWIA certification)

Acquisition Training	Acquisition Training identified at level II must have been completed
Functional	Functional Training identified at level II must have been completed

Training	<ul style="list-style-type: none"> ▶ CLB 008 Program Execution ▶ CLB 009 Planning, Programming, Budgeting, and Execution and Budget Exhibits ▶ CLL 015 Product Support Business Case Analysis (BCA) ▶ CLM 014 IPT Management and Leadership ▶ CLM 031 Improved Statement of Work ▶ CLV 016 Introduction to Earned Value Management ▶ TST 303 Advanced Test and Evaluation (R)
Education	▶ Baccalaureate or graduate degree in a technical or scientific field such as engineering, physics, chemistry, biology, mathematics, operations research, engineering management, or computer science.
Experience	▶ 4 years of test and evaluation T&E experience

Core Plus Development Guide (Desired training, education, and experience)	Type of Assignment		
	HQ and Staff	PM/Matrix Spt	Rg/Lab/Fld Spt Act
CLC 011 Contracting for the Rest of Us	✓	✓	
CLE 009 ESOH in Systems Engineering	✓	✓	✓
CLE 066 Systems Engineering for Systems of Systems	✓	✓	✓
CLL 012 Supportability Analysis	✓	✓	✓
CLM 032 Evolutionary Acquisition	✓	✓	
CLR 151 Analysis of Alternatives	✓	✓	
CLR 250 Capabilities-Based Assessment	✓	✓	
HBS 409 Decision Making	✓	✓	✓
HBS 427 Meeting Management	✓	✓	✓
HBS 441 Team Management	✓	✓	✓
PMT 251 Program Management Tools Course, Part I	✓	✓	
PMT 257 Program Management Tools Course, Part II	✓	✓	✓
SYS 203 Intermediate Systems Planning, Research, Development, and Engineering, Part II (R)	✓	✓	✓
Education			
▶ None specified			
Experience			
▶ At least 2 years of field hands-on T&E activities			

Notes:

- 1** The Core Certification/Training Standards section lists the training and/or education and experience REQUIRED for certification at this level or training for this career path.
- 2** "(R)" following a course title indicates the course is delivered as resident-based instruction.
- 5** When preparing your IDP, you and your supervisor should consider the training, education, and experience listed in the Core Plus Development Guide at this and the lower level(s) if not already completed.