

DAU

Engineering & Technical Management Functional Area

Updated 8 March 2022

UNCLASSIFIED

Engineering and Technical Management (ETM) Functional Area Framework Brief

Mr. Thomas Simms
Acting Director, Engineering Policy & Systems
OUSD(R&E)

8 March 2022



UNCLASSIFIED

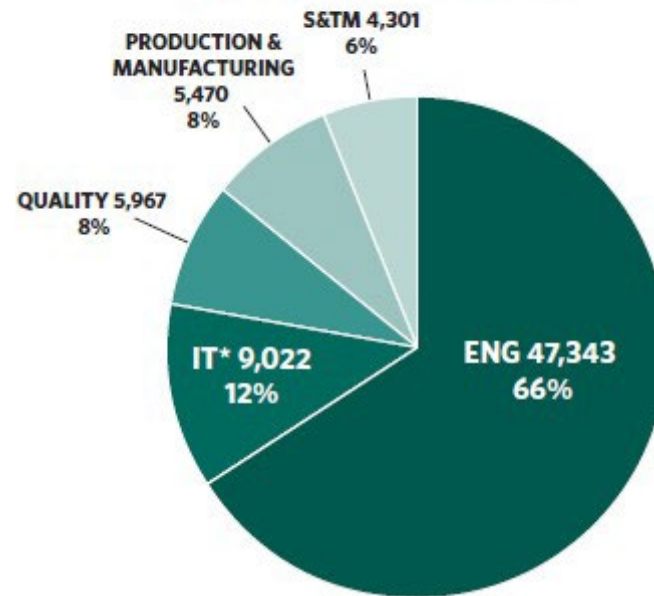


ETM Functional Area Composition

ETM FUNCTIONAL AREA DESCRIPTION:

The ETM workforce has a vital role in developing, fielding, and sustaining high-quality, innovative, affordable, supportable, and effective defense systems and ensuring that DoD products are delivered on time, perform as expected, and are cost-effective. The role requires developing and implementing products and services with an integrated technical approach across the total life-cycle. That includes providing the systems, software, and people to satisfy stakeholder needs and expedite transition of technology to the user, as well as early production planning and systematically examining producibility. The ETM workforce has the strategic perspective, technical competence, and critical thinking needed to operate within various product domains and other engineering and technical disciplines.

ETM Functional Area by Legacy Career Field



*Number of legacy IT Career Field personnel to transition TBD

Functional Area Stats:

- 72,103 Personnel
- 39% of total Defense Acquisition Workforce
- Military vs. Civilian
 - 96% Civilian (69,220)
 - 4% Military (2,883)

Data Source: OUSD(A&S) Defense Acquisition Workforce Data Mart, Q1 FY2020



ETM Competency Model

Tier 2: ETM Core Readiness Competencies

[drivers for certification requirements]

Leading Change	Mission & Systems Thinking	Requirements Definition & Analysis	Technical Management	Design Considerations	Product Realization	Digital Literacy	Software Literacy	Technical Perspective on Defense Contracting
----------------	----------------------------	------------------------------------	----------------------	-----------------------	---------------------	------------------	-------------------	--

Tier 3: ETM Specialty Competencies

[drivers for credentials]

Mission Capability Analysis, Definition, & Characterization	Requirements Analysis Implementation	Cyber Acumen for Engineering	Adversity-Driven Test, Evaluation, Verification, & Validation	Digital Environment Operations & Support	Process Capability & Control
Mission Engineering Approach	Integration	Adversity-Driven Requirements Derivation	Technology Portfolio Management	Modeling, Simulation, & Analysis	Quality Management
Mission Engineering Documentation	Verification & Validation	Analysis of Adversity & Adverse Effects	Technology Protection	Software Assurance	Surveillance Activities
Systems Engineering Management	Transition	Adversity-Driven Design	Technology Transition/Transfer	DevSecOps	Manufacturing Planning, Scheduling, & Control
Stakeholder Requirements Definition	System of Systems / Family of Systems	Adversity-Driven Design Realization	Software Engineering/Design	Software Configuration Management	Industrial Workforce Planning
	Architecture Design		Digital Environment Development	Technology & the Industrial Base	Materials Management
					Facilities

Note: Each Tier 2 and Tier 3 Competency is substantiated with task statements



ETM Certification Framework

Engineering and Technical Management (ETM) Functional Area Certification Framework								
Certification Category	Foundational (within 3 years of position assignment)				Practitioner (within 5 years of position assignment)			
Typical Roles	Engineer (e.g., Systems, Mission, Computer/Electrical/Software, Network, Data, Technician), Architect (e.g., Naval, System, Enterprise, Data), Manager, Scientist, Computer Scientist, Software Developer, Specialist (e.g., Quality Assurance, Industrial, Business and Industry), Production Controller, Researcher, Management and Program Analyst							
Education	<ul style="list-style-type: none"> No degree requirement (Hiring agencies determine Occupational Series which may have requirements) 							
Training	ACQ Core	<ul style="list-style-type: none"> ACQ 1010 			ACQ Core	<ul style="list-style-type: none"> None 		
	ETM Core	<ul style="list-style-type: none"> ETM 1010 ETM 1020 ETM 1030 	<ul style="list-style-type: none"> ETM 1040 ETM 1050 ETM 1060 	<ul style="list-style-type: none"> ETM 1070 ETM 1080 ETM 1090 	ETM Core	<ul style="list-style-type: none"> ETM 2010V ETM 2020V ETM 2030V 	<ul style="list-style-type: none"> ETM 2040V ETM 2050V ETM 2060 	<ul style="list-style-type: none"> ETM 2070V ETM 2080V ETM 2090V
	<i>Estimated Total Hours: 38 hrs (including ACQ Core Training)</i>				<i>Estimated Total Hours: 61 hrs</i>			
Experience	<ul style="list-style-type: none"> At least 1 year relevant acquisition experience with evidence of demonstrated proficiency (Awareness) in ETM competencies Equivalent experience may be considered in government or industry (must be documented and presented in detail) 				<ul style="list-style-type: none"> At least 4 years relevant acquisition experience with evidence of demonstrated proficiency (Intermediate) in ETM competencies. Equivalent experience may be considered in government or industry (must be documented and presented in detail) 			
Assessment	<ul style="list-style-type: none"> No comprehensive exam – test(s) embedded in coursework 							
Validation	<ul style="list-style-type: none"> Self-nominating process containing evidence of applicable experience over time Agency/Organization validates completion of above requirements and provides DoD ETM Certification 							
Certification Currency	<ul style="list-style-type: none"> 80 hours of Continuous Learning (CL)/2years – <i>in accordance with DoDI 5000.66</i> 							
Certification Conversion Plan	<ul style="list-style-type: none"> Level I in ENG, IT, PQM or S&TM Level II in PQM 				<ul style="list-style-type: none"> Level II in ENG, IT, or S&TM Level III in ENG, IT, PQM or S&TM 			

Note: Certification conversions are separate and distinct from position re-designations. Foundational certification is required prior to achieving Practitioner certification.



ETM Certification Training Courses

ETM FOUNDATIONAL CERTIFICATION COURSES

Course	Title	Delivery Mode	Length (hrs)
ACQ 1010	Fundamentals of Systems Acquisition Management	OLT	13
ETM 1010	Leading Change Fundamentals	OLT	1.5
ETM 1020	Mission and Systems Thinking Fundamentals	OLT	1.5
ETM 1030	Requirements Definition and Analysis Fundamentals	OLT	2
ETM 1040	Technical Management Fundamentals	OLT	6
ETM 1050	Design Considerations Fundamentals	OLT	4
ETM 1060	Product Realization Fundamentals	OLT	2
ETM 1070	Digital Literacy Fundamentals	OLT	2.5
ETM 1080	Software Literacy Fundamentals	OLT	3
ETM 1090	Technical Perspectives on Defense Contracting Fundamentals	OLT	2
Total Training Hours			38

ETM PRACTITIONER CERTIFICATION COURSES

Course	Title	Delivery Mode	Length (hrs)
ETM 2010V	Leading Change for Practitioners	VILT	4
ETM 2020V	Mission and Systems Thinking for Practitioners	VILT	4
ETM 2030V	Requirements Definition and Analysis for Practitioners	VILT	6.5
ETM 2040V	Technical Management for Practitioners	VILT	16.5
ETM 2050V	Design Considerations for Practitioners	VILT	10
ETM 2060	Product Realization for Practitioners	OLT	6.5
ETM 2070V	Digital Literacy for Practitioners	VILT	4.5
ETM 2080V	Software Literacy for Practitioners	VILT	5
ETM 2090V	Technical Perspectives on Defense Contracting for Practitioners	VILT	4
Total Training Hours			61

Delivery Mode: OLT = Online Training | VILT = Virtual Instructor-Led Training



Resources

- Defense Acquisition University (DAU) Back-to-Basics (BtB) Home Page: <https://www.dau.edu/back-to-basics>
- Additional resources/information available on Advanced Capabilities website:
 - ETM and T&E Workforce Information: <https://ac.cto.mil/workforce/>
 - Engineering and T&E Policy and Guidance: <https://ac.cto.mil/erpo/>