**Summary of Changes**
**Cybersecurity Competency Model**

The Cybersecurity Competency Model has been updated in 2025 and 2024.

**February 2025 Update**

Updates have been made to Tier 1, to align with the new Building Blocks Model.

**May 2024 Update**

The Advanced Manufacturing Competency Model was updated in April 2024. The updates include removing Tier 5 and aim to replace this tier and highlight the National Initiative for Cybersecurity Education’s (NICE) Workforce [Framework for Cybersecurity](https://www.nist.gov/itl/applied-cybersecurity/nice/nice-framework-resource-center/nice-framework-current-versions), while still keeping Tiers 1-4. This is to maintain the competency model structure for those who prefer to use the Competency Model Clearinghouse downloadable worksheets, and to maintain consistency with other models listed on the Competency Model Clearinghouse

**Tier 5: Industry-Sector Functional Areas**

* Removed Tier 5 in its entirety.

**September 2019 Update**

The Cybersecurity Competency Model was updated in September 2019. The update included health and safety-related competencies and aligned Tier 5 with the current version of the NICE Framework. Due to the nature of the changes in the Categories, Specialty Areas, and Work Roles in the NICE Framework, the previous version of Tier 5 was removed and replaced in its entirety rather than updated item-by-item. The changes to the model are shown below.

# Tier 1: Personal Effectiveness Competencies

* No changes were made to the Tier 1 Competencies.

# Tier 2: Academic Competencies

* Added key behavior description to *2.5 Communication* block.

# 2.5 Communication—Visual and Verbal

* Added key behavior description under key behavior *2.5.2 Communicating (verbally, either directly, through assistive technology, or other accommodation)*:
	+ Added key behavior description: 2.5.2.6 Ask questions or report problems or concerns to people in authority when information or procedures are unclear or need improvement, or when feeling unsafe or threatened in the workplace.

# Tier 3: Workplace Competencies

* Added key behavior block *3.7 Health and Safety*.

# 3.7 Health and Safety

* Added key behavior title *3.7.1 Maintaining a healthy and safe environment*.
	+ Added key behavior descriptions:
		- 3.7.1.1 Take actions to ensure the safety of self and others, in accordance with established personal and jobsite safety practices
		- 3.7.1.2 Anticipate and prevent work-related injuries and illnesses
		- 3.7.1.3 Comply with federal, state, and local regulations, and company health and safety policies
		- 3.7.1.4 Recognize common hazards and unsafe conditions that occur at work, their risks, and appropriate controls to address them
		- 3.7.1.5 Follow organizational procedures and protocols for workplace emergencies, including safe evacuation and emergency response
		- 3.7.1.6 Maintain a sanitary and clutter-free work environment
		- 3.7.1.7 Administer first aid or CPR, if trained, and summon assistance as needed
		- 3.7.1.8 Properly handle and dispose of hazardous materials
* Added key behavior title 3.7.2. Safeguarding one’s person.
	+ Added key behavior descriptions:
		- 3.7.2.1 Engage in safety training
		- 3.7.2.2 Use equipment and tools safely
		- 3.7.2.3 Use appropriate personal protective equipment
		- 3.7.2.4 Recognize how workplace risks can affect one’s life and one’s family
		- 3.7.2.5 Understand the legal rights of workers regarding workplace safety and protection from hazards
		- 3.7.2.6 Report injuries, incidents, and workplace hazards to a supervisor as soon as safely possible
		- 3.7.2.7 Contribute to discussions of safety concerns in the workplace, making suggestions as appropriate

# Tier 4: Industry-Wide Technical Competencies

* No changes were made to the Tier 4 Competencies.

# Tier: 5 Industry-Sector Functional Areas

* Removed all functional area blocks and added new functional area blocks.
	+ Added functional area blocks:
		- 5.1 Securely Provision (SP)
		- 5.2 Operate and Maintain (OM)
		- 5.3 Oversee and Govern (OV)
		- 5.4 Protect and Defend (PR)
		- 5.5 Analyze (AN)
		- 5.6 Collect and Operate (CO)
		- 5.7 Investigate (IN)

# 5.1 Securely Provision (SP)

* Removed all functional area titles and descriptions and added new functional area titles and descriptions.
* Added functional area title: *5.1.1 Risk Management (RSK)*
	+ Added functional area title descriptions:
		- 5.1.1.1 Authorizing Official/Designating Representative
		- 5.1.1.2 Security Control Assessor
* Added functional area title: *5.1.2 Software Development (DEV)*
	+ Added functional area title descriptions:
		- 5.1.2.1 Software Developer
		- 5.1.2.2 Secure Software Assessor
* Added functional area title: *5.1.3 Systems Architecture (ARC)*
	+ Added functional area title descriptions:
		- 5.1.3.1 Enterprise Architect
		- 5.1.3.2 Security Architect
* Added functional area title: *5.1.4 Technology R&D (TRD)*
	+ Added functional area title description: 5.1.4.1 Research & Development Specialist
* Added functional area title: *5.1.5 Systems Requirements Planning (SRP)*
	+ Added functional area title description: 5.1.5.1 Systems Requirements Planner
* Added functional area title: *5.1.6 Test and Evaluation (TST)*
	+ Added functional area title description: 5.1.6.1 System Testing and Evaluation Specialist
* Added functional area title: *5.1.7 Systems Development (SYS)*
	+ Added functional area title descriptions:
		- 5.1.7.1 Information Systems Security Developer
		- 5.1.7.2 Systems Developer

# 5.2 Operate and Maintain (OM)

* Removed all functional area titles and descriptions and added new functional area titles and descriptions.
* Added functional area title: *5.2.1 Data Administration (DTA)*
	+ Added functional area title descriptions:
		- 5.2.1.1 Database Administrator
		- 5.2.1.2 Data Analyst
* Added functional area title: *5.2.2 Knowledge Management (KMG)*
	+ Added functional area title description: 5.2.2.1 Knowledge Manager
* Added functional area title: *5.2.3 Customer Service and Technical Support (STS)*
	+ Added functional area title description: 5.2.3.1 Technical Support Specialist
* Added functional area title: *5.2.4 Network Services (NET)*
	+ Added functional area title description: 5.2.4.1 Network Operations Specialist
* Added functional area title: *5.2.5 Systems Administration (ADM)*
	+ Added functional area title description: 5.2.5.1 System Administrator
* Added functional area title: *5.2.6 Systems Analysis (ANA)*
	+ Added functional area title description: 5.2.6.1 Systems Security Analyst

# 5.3 Oversee and Govern (OV)

* Removed all functional area titles and descriptions and added new functional area titles and descriptions.
* Added functional area title: *5.3.1 Legal Advice and Advocacy (LGA)*
	+ Added functional area title descriptions:
		- 5.3.1.1 Cyber Legal Advisor
		- 5.3.1.2 Privacy Officer/Privacy Compliance Manager
* Added functional area title: *5.3.2 Training, Education, and Awareness (TEA)*
	+ Added functional area title descriptions:
		- 5.3.2.1 Cyber Instructional Curriculum Developer
		- 5.3.2.2 Cyber Instructor
* Added functional area title: *5.3.3 Cybersecurity Management (MGT)*
	+ Added functional area title descriptions:
		- 5.3.3.1 Information Systems Security Manager
		- 5.3.3.2 Communications Security (COMSEC) Manager
* Added functional area title: *5.3.4 Strategic Planning and Policy (SPP)*
	+ Added functional area title descriptions:
		- 5.3.4.1 Cyber Workforce Developer and Manager
		- 5.3.4.2 Cyber Policy and Strategy Planner
* Added functional area title: *5.3.5 Executive Cyber Leadership (EXL)*
	+ Added functional area title description: 5.3.5.1 Executive Cyber Leadership
* Added functional area title: *5.3.6 Program/Project Management (PMA) and Acquisition*
	+ Added functional area title descriptions:
		- 5.3.6.1 Program Manager
		- 5.3.6.2 IT Project Manager
		- 5.3.6.3 Product Support Manager
		- 5.3.6.4 IT Investment/Portfolio Manager
		- 5.3.6.5 IT Program Auditor

# 5.4 Protect and Defend (PR)

* Removed all functional area titles and descriptions and added new functional area titles and descriptions.
* Added functional area title: *5.4.1 Cyber Defense Analysis (CDA)*
	+ Added functional area title description: 5.4.1.1 Cyber Defense Analyst
* Added functional area title: *5.4.2 Cyber Defense Infrastructure Support (INF)*
	+ Added functional area title description: 5.4.2.1 Cyber Defense Infrastructure Support Specialist
* Added functional area title: *5.4.3 Incident Response (CIR)*
	+ Added functional area title description: 5.4.3.1 Cyber Defense Incident Responder
* Added functional area title: *5.4.4 Vulnerability Assessment and Management (VAM)*
	+ Added functional area title description: 5.4.4.1 Vulnerability Assessment Analyst

# 5.5 Analyze (AN)

* Removed all functional area titles and descriptions and added new functional area titles and descriptions.
* Added functional area title: *5.5.1 Threat Analysis (TWA)*
	+ Added functional area title description: 5.5.1.1 Threat/Warning Analyst
* Added functional area title: *5.5.2 Exploitation Analysis (EXP)*
	+ Added functional area title description: 5.5.2.1 Exploitation Analyst
* Added functional area title: *5.5.3 All-Source Analysis (ASA)*
	+ Added functional area title descriptions:
		- 5.5.3.1 All-Source Analyst
		- 5.5.3.2 Mission Assessment Specialist
* Added functional area title: *5.5.4 Targets (TGT)*
	+ Added functional area title descriptions:
		- 5.5.4.1 Target Developer
		- 5.5.4.2 Target Network Analyst
* Added functional area title: *5.5.5 Language Analysis (LNG)*
	+ - Added functional area title description: 5.5.5.1 Multi-Disciplined Language Analyst

# 5.6 Collect and Operate (CO)

* Removed all functional area titles and descriptions and added new functional area titles and descriptions.
* Added functional area title: *5.6.1 Collection Operations (CLO)*
	+ Added functional area title descriptions:
		- 5.6.1.1 All Source-Collection Manager
		- 5.6.1.2 All Source-Collection Requirements Manager
* Added functional area title: *5.6.2 Cyber Operational Planning (OPL)*
	+ Added functional area title descriptions:
		- 5.6.2.1 Cyber Intel Planner
		- 5.6.2.2 Cyber Ops Planner
		- 5.6.2.3 Partner Integration Planner
* Added functional area title: *5.6.3 Cyber Operations (OPS)*
	+ Added functional area title description: 5.6.3.1 Cyber Operator

# 5.7 Investigate (IN)

* Removed all functional area titles and descriptions and added new functional area titles and descriptions.
* Added functional area title: *5.7.1 Cyber Investigation (INV)*
	+ Added functional area title description: 5.7.1.1 Cyber Crime Investigator
* Added functional area title: *5.7.2 Digital Forensics (FOR)*
	+ Added functional area title descriptions:
		- 5.7.2.1 Law Enforcement/Counterintelligence Forensics Analyst
		- 5.7.2.2 Cyber Defense Forensics Analyst