

How NCL Skill Categories Align to the NIST NICE Cybersecurity Work Roles

The National Cyber League (NCL), powered by Cyber Skyline, enables high school and college students across the U.S. to prepare and test themselves against practical cybersecurity challenges they will likely face in the workforce. The National Institute of Standards and Technology (NIST), through the National Initiative for Cybersecurity Education (NICE), has created a widely used Cybersecurity Workforce Framework to standardize cybersecurity competency areas and terminology.

The chart on p. 1-2 shows alignment of the nine NCL Game categories to NIST NICE Cybersecurity **Work Roles**. The chart on p. 3-4 shows alignment of NCL Game categories to NIST NICE Cybersecurity **Specialty Areas**.

Using these two charts, cybersecurity recruiters are able to quickly match the hands-on knowledge and skills of NCL student players to cybersecurity job openings. NCL also aligns with the NSA Centers of Academic Excellence in Cyber Defense (CAE-CD) Knowledge Units and CompTIA Security Certifications.

Visit nationalcyberleague.org for details on getting students involved in the NCL Games.

KEY: The National Cyber League (NCL) Competition consists of nine skill categories shown below.

Open Source Intelligence	Cryptography	Password Cracking	Log Analysis	Network Traffic Analysis	Forensics	Web Application Exploitation	Scanning	Enumeration and Exploitation

NIST NICE CYBERSECURITY WORK ROLE	NIST NICE SPECIALTY AREA	NIST NICE CYBERSECURITY WORKFORCE CATEGORY	NCL SKILL CATEGORIES
THESE ARE THE JOBS	SPECIALIZING IN...	NICE CATEGORY	ALIGNING TO THESE NCL SKILL CATEGORIES
All-Source Analyst	All-Source Analysis	Analyze	
COMSEC Manager	Cybersecurity Management	Oversee and Govern	
Cyber Crime Investigator	Cyber Investigation	Investigate	
Cyber Defense Analyst	Cyber Defense Analysis	Protect and Defend	
Cyber Defense Forensics Analyst	Digital Forensics	Investigate	
Cyber Defense Incident Responder	Incident Response	Protect and Defend	
Cyber Defense Infrastructure Support Specialist	Cyber Defense Infrastructure	Protect and Defend	
Cyber Intel Planner	Cyber Operational Planning	Operate and Collect	
Cyber Operations Planner	Cyber Operational Planning	Operate and Collect	
Cyber Operator	Cyber Operations	Operate and Collect	
Data Analyst	Database Administration	Operate and Maintain	
Database Administrator	Database Administration	Operate and Maintain	
Enterprise Architect	Systems Architecture	Securely Provision	
Exploitation Analyst	Exploitation Analysis	Analyze	
Forensics Analyst	Digital Forensics	Investigate	

How NCL Skill Categories Align to the NIST NICE Cybersecurity Work Roles (cont.)

KEY: The National Cyber League (NCL) Competition consists of nine skill categories shown below.



NIST NICE CYBERSECURITY WORK ROLE	NIST NICE SPECIALTY AREA	NIST NICE CYBERSECURITY WORKFORCE CATEGORY	NCL SKILL CATEGORIES
THESE ARE THE JOBS	SPECIALIZING IN...	NICE CATEGORY	ALIGNING TO THESE NCL SKILL CATEGORIES
Information Systems Security Developer	Systems Development	Securely Provision	
IT Program Auditor	Acquisition and Program/Project Management	Oversee and Govern	
Language Analyst	Language Analysis	Analyze	
Network Operations Specialist	Network Services	Operate and Maintain	
Partner Integration Planner	Cyber Operational Planning	Operate and Collect	
Privacy Compliance Manager	Legal Advice and Advocacy	Oversee and Govern	
Requirements Planner	Systems Requirements Planning	Securely Provision	
Research & Development Specialist	Technology R&D	Securely Provision	
Secure Software Assessor	Software Development	Securely Provision	
Security Architect	Systems Architecture	Securely Provision	
Security Control Assessor	Risk Management	Securely Provision	
Software Developer	Software Development	Securely Provision	
System Administrator	Systems Administration	Operate and Maintain	
Systems Developer	Systems Development	Securely Provision	
Systems Security Analyst	Systems Analysis	Operate and Maintain	
Target Analyst	Targets	Analyze	
Target Developer	Targets	Analyze	
Technical Support Specialist	Customer Service and Technical Support	Operate and Maintain	
Testing and Evaluation Specialist	Test and Evaluation	Securely Provision	
Vulnerability Analyst	Vulnerability Assessment and Management	Protect and Defend	
Warnings Analyst	Threat Analysis	Analyze	

How NCL Skill Categories Align to the NIST NICE Cybersecurity Specialty Areas

KEY: The National Cyber League (NCL) Competition consists of the nine skill categories shown below.



NIST NICE SPECIALTY AREA	NIST NICE CYBERSECURITY WORK ROLE	NIST NICE CYBERSECURITY WORKFORCE CATEGORY	ALIGNMENT TO NCL COMPETITION CATEGORIES
GENERAL SPECIALTY	SAMPLE WORK TITLE	NICE CATEGORY	ALIGNING TO THESE NCL SKILL CATEGORIES
Acquisition and Program/Project Management	IT Program Auditor	Oversee and Govern	
All-Source Analysis	All-Source Analyst	Analyze	
Customer Service and Technical Support	Technical Support Specialist	Operate and Maintain	
Cyber Defense Analysis	Cyber Defense Analyst	Protect and Defend	
Cyber Defense Infrastructure	Cyber Defense Infrastructure Support Specialist	Protect and Defend	
Cyber Investigation	Cyber Crime Investigator	Investigate	
Cyber Operational Planning	Cyber Intel Planner	Operate and Collect	
Cyber Operational Planning	Cyber Operations Planner	Operate and Collect	
Cyber Operational Planning	Partner Integration Planner	Operate and Collect	
Cyber Operations	Cyber Operator	Operate and Collect	
Cybersecurity Management	COMSEC Manager	Oversee and Govern	
Database Administration	Data Analyst	Operate and Maintain	
Database Administration	Database Administrator	Operate and Maintain	
Digital Forensics	Cyber Defense Forensics Analyst	Investigate	
Digital Forensics	Forensics Analyst	Investigate	
Exploitation Analysis	Exploitation Analyst	Analyze	
Incident Response	Cyber Defense Incident Responder	Protect and Defend	
Language Analysis	Language Analyst	Analyze	
Legal Advice and Advocacy	Privacy Compliance Manager	Oversee and Govern	
Network Services	Network Operations Specialist	Operate and Maintain	

How NCL Skill Categories Align to the NIST NICE Cybersecurity Specialty Areas (cont.)

KEY: The National Cyber League (NCL) Competition consists of the nine skill categories shown below.



NIST NICE SPECIALTY AREA	NIST NICE CYBERSECURITY WORK ROLE	NIST NICE CYBERSECURITY WORKFORCE CATEGORY	ALIGNMENT TO NCL COMPETITION CATEGORIES
GENERAL SPECIALTY	SAMPLE WORK TITLE	NICE CATEGORY	ALIGNING TO THESE NCL SKILL CATEGORIES
Risk Management	Security Control Assessor	Securely Provision	
Software Development	Secure Software Assessor	Securely Provision	
Software Development	Software Developer	Securely Provision	
Systems Administration	System Administrator	Operate and Maintain	
Systems Analysis	Systems Security Analyst	Operate and Maintain	
Systems Architecture	Enterprise Architect	Securely Provision	
Systems Architecture	Security Architect	Securely Provision	
Systems Development	Information Systems Security Developer	Securely Provision	
Systems Development	Systems Developer	Securely Provision	
Systems Requirements Planning	Requirements Planner	Securely Provision	
Targets	Target Analyst	Analyze	
Targets	Target Developer	Analyze	
Technology R&D	Research & Development Specialist	Securely Provision	
Test and Evaluation	Testing and Evaluation Specialist	Securely Provision	
Threat Analysis	Warnings Analyst	Analyze	
Vulnerability Assessment and Management	Vulnerability Analyst	Protect and Defend	