CAREER SKILLS FOR
Cybersecurity Specialist/Technician or Cyber Defense Analyst

ADDITIONAL RESOURCES
National Initiative for Cybersecurity Careers and Studies
niccs.cisa.gov

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Cybersecurity specialist/technicians and Cyber defense analysts use data collected from a variety of cyber defense tools to analyze events that occur within their environments for the purposes of mitigating threats (NICE Framework PR-CDA-001).

**JOB-SPECIFIC SKILLS**

*Skills and knowledge you will obtain at Lakeland to prepare for a successful career in the field.*

**HARDWARE/SOFTWARE SKILLS:**
- Detect host and network-based intrusion via intrusion detection technologies
- Determine how a security system should work and how changes in conditions, operations, or the environment will affect these outcomes
- Evaluate the adequacy of security designs
- Use incident handling methodologies
- Use protocol analyzers
- Collect data from a variety of cyber defense resources
- Recognize and categorize types of vulnerabilities and associated attacks
- Assess security controls based on cybersecurity principles and tenets
- Perform packet-level analysis
- Recognize vulnerabilities in security
- Conduct trend analysis systems
- Apply cybersecurity and privacy principles
- Use cyber defense service provider reporting structure and processes within ones’ own organization to organizational requirements

**PROGRAMMING SKILLS:**
- Systems analysis and design
- Use logic and problem-solving
- Basic programming skills

**GENERAL MANAGEMENT SKILLS:**
- Capacity planning for growth and changes
- Decision making
- Leadership
- Presentation preparation
- Project management
- Set-up and maintenance of documentation and standards
- Understand core business functions and how information technology interrelates with business

Skills you have acquired throughout your life that will help you excel in the field include:

- Ability to multitask
- Leadership
- Logical thinking
- Organizational proficiency
- P凶手t for learning
- Problem-solving
- Verbal and written communication

These nontechnical attributes will enable you to be a competent, reliable employee in any company.

- Accurate
- Adaptable
- Analytical
- Collaborative
- Creative
- Critical thinker
- Customer-focused
- Deadline-oriented
- Detail-oriented
- Demonstrate initiative
- Efficient
- Ethical
- Flexible
- Honest
- Independent
- Investigative
- Logical
- Organized
- Patient
- Personable
- Problem solver
- Professional presence
- Questioning
- Quick learner
- Respectful
- Self-motivated

Note: This is only a representative list and does not exhaust all possible titles in the field.

- Cybersecurity Specialist/Technician
- Cyber Defense Analysis
- Cybersecurity Engineer
- Cybersecurity Analyst
- Cybersecurity Consultant
- Cybersecurity Manager/Administrator
- Vulnerability Analyst/Penetration tester
- Network Engineer/Architect
- Systems Engineer/Software Developer/Engineer

*Some positions may require a bachelor’s degree or higher.

Note: This is only a representative list and does not exhaust all types of employers.

- Banks and financial institutions
- Consulting companies
- Education
- Government agencies
- Health care
- Insurance companies
- Manufacturing
- Nonprofit organizations
- Public accounting
- Real estate
- Research
- Retail
- Self-employment
- Service
- Technology
- Wholesale
### Network and Computer Systems Administrators (national averages)

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020 Median Pay</td>
<td></td>
<td>$103,590 per year/$49.80 per hour</td>
</tr>
<tr>
<td>Typical Entry-Level Education</td>
<td></td>
<td>Bachelor's degree</td>
</tr>
<tr>
<td>Work Experience in a Related Occupation</td>
<td></td>
<td>Less than 5 years</td>
</tr>
<tr>
<td>On-the-job Training</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Number of Jobs, 2019</td>
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<td>131,000</td>
</tr>
<tr>
<td>Job Outlook, 2019-29</td>
<td></td>
<td>31% (Much faster than average)</td>
</tr>
<tr>
<td>Employment Change, 2019-29</td>
<td></td>
<td>40,900</td>
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</tbody>
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