

# STEM PATHWAY BRIEF

## CYBER.ORG CYBER SECURITY (FORMERLY NICERC)



### OVERVIEW

The CYBER.ORG (formerly NICERC) Cyber Security pathway allows students to engage in a program of study that combines computer science, engineering and mathematics through hands-on projects and interaction with industry professionals. Students will debate the tradeoffs of privacy and security when interacting with their increasingly digital presence; they will discuss the ethics of advancements in robotics and artificial intelligence as they consider the value of true autonomous devices; and in a quest to design and iterate better devices, they will build complex systems capable of multiple sensory inputs and advanced logic structures. Pathway coursework prepares TOPS University and Jump Start TOPS Tech diploma-seeking students to compete in the 21st century by immersing them in the fundamentals of cyber as well as its impacts and applications in the workplace.

### COLLEGE AND CAREER CONNECTIONS

College Ready	Career Ready
<ul style="list-style-type: none"><li>• Computer Science</li><li>• Computer Information Systems</li><li>• Computer Forensics and Digital Investigations</li><li>• Cyber Defense</li><li>• Cyber Engineering</li><li>• Cyber Operations</li><li>• Cybersecurity</li><li>• Cybersecurity Engineer</li><li>• Cybersecurity Research</li><li>• Information Assurance</li><li>• IT: Networking and Security</li><li>• Management Information Systems</li><li>• Network Security Engineer</li><li>• Security Informatics</li><li>• Systems Design Engineer</li></ul>	<ul style="list-style-type: none"><li>• Associate Cybersecurity Analyst</li><li>• Computer Forensics Analyst</li><li>• Computer Programmer</li><li>• Cybercrime Analyst</li><li>• Cybersecurity Analyst</li><li>• Cybersecurity Consultant</li><li>• Cybersecurity Specialist</li><li>• Cybersecurity Technician</li><li>• Incident Analyst</li><li>• Incident Responder</li><li>• Information Security Analyst</li><li>• Intelligence Analyst</li><li>• IT Auditor</li><li>• IT Security Specialist</li><li>• IT Specialist</li><li>• IT Support Specialist</li><li>• Network Support Specialist</li><li>• Penetration Tester</li><li>• Security Analyst</li><li>• Security Consultant</li><li>• Security Engineer</li></ul>

### STATEWIDE CREDENTIALS INCLUDED

- *Comp TIA A+ **Basic***
- *Comp TIA IT Fundamentals **Basic***
- *Comp TIA Network+ Certification **Basic***






### STEM DIPLOMA SEALS

#### GOLD SEAL

Students will earn a Gold STEM Diploma Seal by satisfying the requirements for a Silver STEM Diploma Seal and completing four additional courses from the Qualifying Course list.

#### SILVER SEAL

Students who successfully complete four of the required courses will earn a Silver STEM Diploma Seal.

Required Courses (4)			
Course Title	Course Code	Carnegie Credits	5-Point Scale
Cyber Literacy (NICERC Partnership)	040221	1	
Cyber Literacy II (NICERC Partnership)	040222	1	
Cyber Science (NICERC Partnership)	040219	1	
Computer Science I <b>OR</b>	061102	1	
AP Computer Science A <b>OR</b>	061175	1	✓
AP Computer Science Principles	061177	1	
Additional Courses (choose 4)			
Course Title	Course Code(s)	Carnegie Credits	5-Point Scale
Cyber Society (NICERC Partnership)	040218	1	
Intro to Computational Thinking for STEM (LSU Partnership)	061140	1	
Data Manipulation and Analysis (LSU Partnership)	080532	1	
 Probability and Statistics <b>OR</b>	160349	1	
Probability and Statistics: AP Statistics	160352	1	✓
AP Computer Science Principles	061177	1	
 AP Computer Science A	061175	1	✓
 Calculus: AP Calculus AB <b>OR</b>	60327	1	✓
Calculus: AP Calculus BC	160328	1	✓
Physics I: AP Physics I - Algebra Based <b>OR</b>	150724	1	✓
 Physics: AP Physics II - Algebra Based <b>OR</b>	150725	1	✓
AP Physics C: Electricity and Magnetism <b>OR</b>	150794	1	✓
AP Physics C: Mechanics	150795	1	✓
 AP Psychology	222004	1	✓
COMPTIA + Fundamentals of Computer Installation and Configuration	061130	1	
COMPTIA + Networking Fundamentals	061122	1	
For Jump Start Tops Tech Diploma: Required Career Readiness Courses (1)			
Course Title	Course Code(s)	Carnegie Credits	5-Point Scale
Intro to STEM Pathways and Careers: LSU Partnership	061139	1	
Quest for Success	080411	1	
Agriscience I	010301	1	
Jobs for America's Graduates I	042010	1	
General Technology Education (Introduction to Skilled Crafts)	110010	1	
Introduction to Health Occupations	090029 <b>OR</b> 090930	1	

DE: Dual Enrollment, AP: Advanced Placement

## UNIVERSAL DOCUMENTS

[CDF ELIGIBLE COURSES](#) • [JUMP START FUNDING](#) • [UNIVERSAL COURSE CODES](#)