

## CYBERSECURITY COURSE OVERVIEW



### Course Description

- The Cybersecurity Micro-credential was built in partnership with Kingsland University to exclusively offer MajorClarity users a free course teaching the foundational knowledge, skills, and abilities needed to understand the purpose and function of Cybersecurity Technology. This micro-credential will help prepare you and qualify you for further pursuit of educational opportunities within Cybersecurity, covering topics such as Cryptography, Networking, and IT Architecture.
- Partner: Kingsland University
- Target Audience: Grades 9-12
- Course Length: 3-4 Hours

### Core Competencies

#	Competencies	Subcompetencies/Topics
1	Intro to Cybersecurity	Overview of Cybersecurity Goals of Cybersecurity Types of Cybersecurity Threats Offensive vs. Defensive Cybersecurity Jobs in Cybersecurity
2	Cryptography	What is Cryptography? Alice and Bob Encryption Concepts Public Key Infrastructure (PKI) & Digital Certificates Recovery Agents and Key Escrow Blockchain and Cryptocurrencies
3	IT Architecture	Electronic Communication Systems & Methods Communication Methods, Principles, & Concepts Information Theory
4	Networks	Architecture Concepts Network Types Network Protocols Hardening Techniques

### Suggested Use Cases

- Embed into first level courses for pathway sequences that culminate in industry placements, such as:
  - IT Fundamentals
  - Informational Technology
- Use as a differentiator between Honors and Standard Levels of same course
- Require as pre-requisite prior to Industry-facing experiences or placements such as:
  - Career Fairs, Lunch & Learns, Job Shadowing
  - Summer Work Opportunities, Internships, & Apprenticeships
- Leverage as a tool to help students clarify potential post-secondary program/majors of interest, which may also further focus college & technical program considerations

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## Course Outline

### INTRODUCTION

- Navigating the Course
- Course Objectives
- What is Cybersecurity?

### OVERVIEW OF CYBERSECURITY

- Goals of Cybersecurity
- Types of Cybersecurity Threats
- Offensive vs. Defensive Cybersecurity
- Jobs in Cybersecurity
- [Knowledge Check](#)

### CRYPTOGRAPHY

- What is Cryptography?
- Alice & Bob
- Encryption Concepts
- Public Key Infrastructure & Digital Certificates
- Recovery Agents & Escrow
- Blockchain & Cryptocurrencies
- Vocabulary Review
- [Knowledge Check](#)

### IT ARCHITECTURE

- IT Architecture Defined
- Electronic Communication Systems & Methods
- Information Theory
- Vocabulary Review
- [Knowledge Check](#)

### NETWORKS

- Architecture Concepts
- Network Types
- Network Protocols
- Systems Hardening Techniques
- Vocabulary Review
- [Knowledge Check](#)

### FINAL ASSESSMENT

- [Final Assessment](#)
- Congratulations!