Cybersecurity

TIME	PREREQUISITES	BUILT WITH
Two 3 month terms Study 10 hrs/week	Python programming, Linux and networking basics	chronicle

Our Mission

Cloud computing's instrumental role in shaping the ongoing transformation of modern enterprise infrastructure is unquestionable.

From allowing companies of all sizes to roll out services at an unprecedented scale, to unlocking productivity gains and creating new possibilities, it continues to define and shape the very patterns used to develop and deploy modern Internet products and services. It is at once an asset to those that rely on it, and an extremely attractive target to those that stand to benefit from successful cyberattacks.

Udacity's **Cybersecurity Nanodegree program** aims at democratizing state-of-the-art security defenses—with a particular focus on **cloud infrastructure security.** It is built with the cloud in mind, from day one, targeting **engineers** at **companies of all sizes.**

By emphasizing a **builder's approach**, our graduating engineers will learn how to leverage the true power of cloud-native security patterns and tools without ever losing sight of the security fundamentals that need to be built into the world's global infrastructure.

The Audience

Our target audience is **technical** (software developers, IT professionals). The ideal participants are:

- **Junior technical professionals looking to get into the security profession.** Target jobs: Security Engineers.
- **Security professionals in non-technical roles such as Auditors, Risk Managers and Security consultants** looking to switch to security engineering role
- **Professionals with indirect security responsibilities**, such as Systems Administrators, Developers, DevOps Engineers.

Pre-requisite skills: **Intermediate programming experience**, at least Python or Go, as well as familiarity with Linux, networking, and cloud basics.

The Program

The Cybersecurity Nanodegree Program will cover the following main content areas:

- Fundamentals Refresher: Networking, Systems, Programming, APIs
- Cloud Infrastructure Security
- Product and Application Security
- Monitoring and Detection
- Analytics

A common theme throughout the program will be the Security Mindset , that is, placing heavy emphasis on imparting non-technical skills that are just as important for the success of the modern security engineer:

- The ability to effectively drive change by building trust with engineering teams
- Providing contextual analysis while articulating security issues
- Proposing actual solutions to security challenges

The program will:

- Take 6 months, structured as two terms at 3 months each. Requiring approx 10h / week
- Includes 6 hands-on projects and a personal capstone project at the end
- Include personal mentorship, personal project reviews, student community, and career support

Built with Industry

Udacity always starts with real job requirements and verified industry demand. We go above and beyond to talk to hiring managers, technical leaders, founders, company decision makers, and industry thought leaders to build exactly what (1) closes the biggest actual talent gap and (2) thereby adds the most value to a participant's professional career.

We work with industry-leading companies and in multiple ways: as content advisors, data/ project contributors, scholarship sponsors, or hiring partners.

A Builders' Approach

As all Nanodegree programs, **hands-on projects** are the core of the education we provide. As part of the Cybersecurity Nanodegree Program, the students will have:

- Designed and deployed a cloud stack in AWS or GCP
- Detected and auto-remediated cloud misconfigurations that could have created security holes
- Taken application security to another level by deploying pervasive encryption using key management systems
- Taken inventory of a system, assessed the security situation, and proposed changes

The Outcomes

After successful completion of all projects and graduation, the participants will be able to:

- Work as **security-minded software engineers** at companies of all sizes
- Assume a dedicated **Security Engineering** role in a security or engineering team

This program is designed to be **job-ready**, that is, successful graduates will have the theoretical and practical skills to be successful in the roles outline above—whether it's through a promotion or transfer in their current company or by starting a new career in the security domain.