



Introduction to Cybersecurity

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In a world so heavily integrated with technology, cybersecurity is not only an essential but extremely fulfilling field.

You've heard of it everywhere, from major corporate data breaches or ransomware attacks in news headlines, to the regular reminders to never share your passwords when signing up for social media accounts.

Cybersecurity is everywhere... and that's because of a simple, singular cybersecurity principle—one of the many you'll learn throughout these modules.



if it can be connected to, it can be hacked.

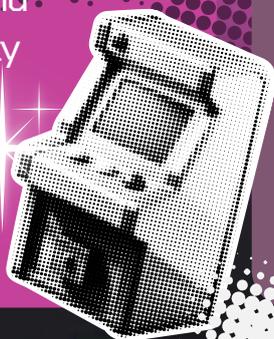


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Yes, that includes nearly everything.

Most people think of the regular things like social media accounts or even video games upon hearing the word "hacking"—but have you thought of security systems and cameras, smart appliances, or even fish tanks?

The possibilities are endless, and that's exactly why cybersecurity is so important.



As technology grows, so does the need for this field and cybercrime awareness. It's a timeless truth, even for the day-to-day end user.

Studying cybersecurity gives even the average person power, simply through knowing what happens behind the scenes with the systems we interact with every day. It completely changes your perspective and how you interact with technology— and thus, the entire world. If that speaks to you, then you've definitely made the right decision to begin learning and become a Cyber Valkyrie!

the challenges

However, much like other computing fields, the initial stages of getting into cybersecurity isn't exactly easy...

With a field so vast, sifting through misconceptions and unrealistic expectations or even just finding where to start can often feel like a challenge. That's exactly what intimidates people and drives them out of the field, leading them to miss out on a journey worth a lifetime.



Barely comprehensible "beginner" tutorials, overpriced courses that promise "becoming haxx0r in 6 months!!!!!!", or **ages** spent learning theoretical material to forget it the following morning...

Nearly everyone in cyber has experienced it.

For women and young girls interested in cyber, these issues are only exacerbated.

There's all that was previously discussed, but only in addition to a lack of representation, a whole lot of stereotypes, and often, inadequate education and networking opportunities...

but it doesn't have to be that way!

This is where CyberValkyries steps in!

We want to turn your passion for cybersecurity into something real, with the support and connections you deserve to make the learning process as smooth and exciting as possible.

the

HACKERS

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mindset

It's EXTREMELY important to establish from the very beginning of your journey into cybersecurity that "hacking" is a mindset. It's less scripts and tools and neon green terminals and instead an intuitive process fueled by no more than your curiosity and your ability to persist and find innovative solutions.

Often times, that means changing how you see problems entirely. You question things others don't or would usually brush off. You challenge the status quo and seek out overlooked weaknesses. You think creatively and use unconventional methods to get to where you want to be— and most importantly, you persist. You persist and persist and persist, even upon hitting roadblocks or dead-ends.

Yes, the true hacker's secret is simply never giving up :-).

That mindset change is often what people find most difficult about cybersecurity, even if they don't notice it at first.

You're going to face many, many different and undoubtedly difficult challenges throughout your journey, but so does everyone.

That's why it's important to remind yourself of your motivation and why you're getting into cybersecurity in the first place. Right now is the perfect time to ask yourself:



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answer is...

The answer to that question is different for everyone. To some people, it's protecting the things that matter and using systems to help and protect those who need it most. To others, it's a love for the challenging and the complex... or the satisfaction of getting a system to do something it technically shouldn't. Some simply appreciate the dynamic environment and growth opportunities that careers in cyber offer.

Ultimately, cybersecurity is about learning what breaks systems so we can better defend them— but your motivation is entirely you.



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fields and specialization

We've been speaking about cybersecurity as a whole throughout the majority of this module, but it's a good idea to glance over the different specializations in cybersecurity.

Cybersecurity is often categorized into offensive security and defensive security.

An easy way to think of it is: **Offensive security** is proactive, carrying out attacks to identify vulnerabilities and weaknesses before an adversary does. **Defensive security**, on the other hand, refers to the monitoring, detection, and protection against threats in real-time.



offensive security

- **Penetration Testing:** Authorized simulating of cyberattacks to identify, exploit, and document security vulnerabilities in technologies
- **Red Teaming:** Large scale, comprehensive adversarial simulations that evaluate an organization's overall security by simulating attacks across technical, physical, and social vectors

offensive
defensive

defensive security

- **Security Analysis:** auditing, monitoring, and analysis of different security events to protect systems from threats and respond to breaches
- **Security Engineering:** configuring and implementation of architectures and measures to detect and prevent cybersecurity risks
- **Digital Forensics:** collection and analysis of digital evidence to investigate cyber incidents, supporting legal or organizational proceedings

So, whether you're interested in breaking systems or building them from the ground up, there's *something* for everybody!

a

NEW

Beginning

We hope you're just as excited to start your cybersecurity journey as we are to provide you with these modules!

Throughout this course, you'll learn plenty— like the systematics of cyber attacks, how to protect yourself and those around you, the necessary skills and tools to succeed in cyber, and of course, how to start legally hacking yourself.

Remember!

what makes a cyber valkyrie is her ability to:

- ask questions, even when no one else does
- be curious, and thus skeptical, of the security and credibility of the technologies she uses
- learn how systems work and what breaks them, even if people don't expect her to
- never stop, even when it gets hard!
- support other girls with her and spread her knowledge during her cyber journey ♡

This is just the beginning of something great. Stay tuned and keep learning!