

# CAREERS WITH STEM™ JOB KIT

# CYBER SECURITY ANALYST

Discover an in-demand career helping protect people and organisations from cybercrime

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# Block the strike

Unleash your inner  
Red Teamer  
Threat Hunter  
Cybercrime Investigator  
Digital Forensic Analyst



**Graduate a Cyber  
Defender with  
Torrens University**



## Graduate work-ready

Our courses are co-designed with industry, giving you confidence you'll graduate work-ready.



## 1:1 guidance from industry experts

Learn from passionate experts who offer industry insights and work-ready skills.



## Industry placements

Students have access to thousands of industry placement opportunities with top-tier employers.



**DR AMMAR ALAZAB**  
**SENIOR LECTURER,**  
**TORRENS UNIVERSITY**

# FIGHTING CRIME

Being a cyber security analyst is a lot like being a cop of the digital world

**W**orking in cyber security is like being a cyber cop - every day you're investigating, looking for evidence and working to stop criminals and protect people and businesses. So a career in cyber security comes with a real sense of satisfaction.

But to win against the criminals means always being one step ahead!

I started my career as a programmer, but it was during my PhD scholarship that I was able to make a name for myself by finding a novel way to identify malicious software.

The interesting thing about cyber security is there is no one solution, it takes lots of different approaches and people from different backgrounds to be able to combat cybercrime. Within cyber security you can specialise in protecting systems like in network security, or investigating after a cyber attack, like in digital forensics.

So many every day things, from energy to telecommunications and transport, rely on cyber security to keep working, meaning it's a field that's in high-demand. Working in cyber security you

**SO MANY THINGS WE USE EVERY DAY RELY ON CYBER SECURITY"**

can be well paid, travel the world, move jobs often, and work in dozens of different sectors, be it for government or industry.

At Torrens University we teach cyber security best practice, but it's not all theory. Students get hands-on experience with practical classes in subjects like application testing. We also work with industry to get their input on course content to ensure it's up-to-date.

With the growth of AI, cyber security is going to continue to adapt. AI is both a threat and an opportunity because it can be used to identify and stop attacks, but is also being used by more people to commit cyber crimes.

Want to be part of the next generation using AI for good? Read on to learn more about this exciting career.

**Dr Ammar Alazab**  
**Senior Lecturer, Torrens University**

**BACHELOR OF IT, AL-BALQA' APPLIED UNIVERSITY BAU**

**PHD IN COMPUTER AND INFORMATION SYSTEMS SECURITY/INFORMATION ASSURANCE, DEAKIN UNIVERSITY**

**POSTDOCTORAL RESEARCH FELLOW, BINGHAMTON UNIVERSITY**

**SENIOR CYBERSECURITY RESEARCHER, INTERNET COMMERCE SECURITY LABORATORY (ICSL)**

**SENIOR CYBER AND NETWORKING SECURITY LECTURER, MELBOURNE INSTITUTE OF TECHNOLOGY**

**SENIOR LECTURER, TORRENS UNIVERSITY**

**Check out CareerswithSTEM.com for more insights, information, inspiration and advice about cyber security careers!**

# BE A CYBER DEFENDER

Not all heroes wear capes... some use their cyber security skills to take down hackers!

**W**ant to land a career that's exciting, challenging, can be done from almost anywhere in the world and has a solid salary? Then you should definitely jump on a cyber security study and career path. Start your journey with a Bachelor of Cybersecurity from Torrens University (it has amazing industry links) and you could find yourself working as a cyber security analyst in a wide range of industries, like finance, retail, health, education, energy and more.

According to SEEK, jobs in this area will grow by 38.9% in the next five years, so as a cyber security analyst you'll be super employable. And with cyber attacks furiously on the rise? There will never be a dull day wherever you choose to work!

## All about you

You'll love this career if you:

- ✓ Spend lots of time solving puzzles
- ✓ Are very detail-orientated
- ✓ Have strong communication skills
  - ✓ Get excited about the latest tech
- ✓ Are curious, creative and super organised

## EXCELLENT EMPLOYERS

As a cyber security analyst, you could work for companies like:

**PALO ALTO NETWORKS**

**CISCO**

**FORTINET**

**IBM**

**Bonus:** Students studying a cyber security course at Torrens University are eligible for a complimentary AISA student membership. AISA is the largest national peak body for cyber security.

## TO-DO LIST

As a cyber security analyst, some of your responsibilities could include:

- Protecting an organisation's network and systems from cyber attacks
- Acting as a cyber defender to conduct threat and risk analysis
- Developing innovative cyber security solutions to protect a company and people from harm
- Beating hackers at their own game by using ethical hacking and penetration testing practices
- Staying up-to-date with latest trends in the cyber security industry

## Show me the money

The average salary range for a cyber security analyst is **\$103,176 - \$136,380**, according to talent.com

## Secure study

Studying a Bachelor of Cybersecurity at Torrens University will set you up to fight cybercrime. There are so many benefits to having this degree under your belt. Not only is it designed and delivered by industry leaders, you'll develop your ethical hacking skills on corporate servers (like **Linux**), and master programming languages used by cyber experts (think **C++** and **Python**). Oh, and once you successfully complete the degree, you're guaranteed entry into their **Master of Cybersecurity!**

## TOP 3 CYBERCRIMES EXPERIENCED BY INDIVIDUALS

1. Identity fraud
2. Online banking fraud
3. Online shopping fraud

## TOP 3 CYBERCRIMES EXPERIENCED BY BUSINESSES

1. Email compromise
2. Business email compromise fraud
3. Online banking fraud

## CYBER SECURITY BY THE NUMBERS

**10.5 TRILLION** dollars (US) is how much cybercrime is forecasted to cost the world by 2025.

**29 BILLION** dollars is the cost of cybercrime to Australia per year.

**101.6 MILLION** dollars is how much the Australian Government will provide over the next few years to support and uplift cyber security in this country.

**94,000** cybercrimes were reported to the Australian Signals Directorate in 2022-2023.

## MYTHS BUSTED

404  
ERROR

**#1**

### I'm protected from cybercrime if I have a strong password

Ahh, nope! The Australian Cyber Security Centre recommends the following for securing your devices and online accounts:

- Updating your devices (and replacing those that no longer receive updates)
- Activating multi-factor authentication
- Regularly backing up your devices
- Setting secure passphrases
- Watching out for scams

**#2**

### The biggest threat to businesses is the hacking of a server

Wrong. It's actually human errors in judgement! This is one of the main reasons behind cyber security breaches and incidents. Organisations need to strengthen all their defences against hackers and need cyber security analysts to help them do this.

# PROGRAMMED TO PROTECT

TORRENS UNIVERSITY STUDENT **DANIEL IFANTIS** DREAMS OF FIGHTING CYBERCRIME...WITH CODE

**DANIEL IFANTIS**  
BACHELOR OF  
CYBERSECURITY  
STUDENT



**D**aniel and tech go way back. In high school Information and Digital Technology (IDT) and Information Systems Technology (IST) were his favourite subjects, which made enrolling in a Bachelor of Cybersecurity at Torrens University a no-brainer.

"I thought I'd enjoy the coding and programming aspects of cyber security," he says. "I was keen to put my [tech] skills into practice."

Two years into his degree, it's clear Daniel is on the right path. He's loving his coursework at Torrens University (yep, even the assignments), and is pumped to start learning about ethical hacking – an area crying out for talented grads.

"It's exciting seeing my programs come alive," he says. "At the moment I'm working on an assignment that involves the use of programming – it's so cool to see how even the simplest programs can be used in the most advanced ways."

## More fun to come

With a stint of work experience at tech company Workventures already under his belt, Daniel is keen to spend the rest of his degree focusing on what he loves best – the behind-the-scenes tech involved in fighting cybercrime.

On his to-do list this trimester

is nailing the use of specialised software and perfecting his programming smarts.

"I love learning how things work, so pen-testing really interests me too," he says of his career goals. "I want to help secure businesses!"

In the meantime you'll find Daniel hanging out with his girlfriend on campus, getting fluent in code and dreaming of becoming a cyber security expert. But it's not all pen-testing and programming!

"After class I head home, relax, get on my computer and play games!" Daniel admits. Which totally counts as tech-related research, right?

**"IT'S EXCITING TO SEE MY PROGRAMS COME ALIVE"**

# SHE CAN HACK IT!

Second year Torrens University cyber security student **Christiana Kouroushis** hopes to land a grad gig at Google — and with IT skills in her blood, she's halfway there

## Tell us about high school — which subjects did you rate?

"Design and Technology (DT) were my faves - I loved the coding! I made a couple of very cool websites in Information Security Multimedia too."

## What made you decide on studying a Bachelor of Cybersecurity?

"Most of my family is in information technology (IT), so I got exposed to it at a very young age - I couldn't imagine doing anything else! I started a networking degree but cyber security piqued my interest when it became my major."

## You're halfway through your degree at Torrens University. What's one of the coolest things so far?

"All our classes are very hands-on — it's not all essays and PowerPoint, which is great. We learn about real-world cyber security breaches and how to stop them - like the recent Optus hack. It's crazy how often things like that happen."

## Any units you are particularly excited about?

"The coolest is probably one that I haven't even started - ethical hacking. I want to learn how to help people by hacking ethically. It looks so good."

## What's life like on campus?

"So fun! The classes are small and everyone is friendly. Outside of class there are always plenty of events going on — there's never a dull moment."

## What excites you most about a cyber security career?

"It's an ever-growing and changing line of work, which means the demand for jobs is always growing. Tech is constantly innovating, changing and evolving, so I won't ever be stuck doing the same thing for too long."

## Do you have a dream job in mind?

"I'd love to work for Google. I think it's absolutely genius how they are always innovating and improving the standard of work-life balance for employees. There would be so many learning opportunities too."



**CHRISTIANA KOUROUSHIS**  
BACHELOR OF CYBERSECURITY STUDENT



DESIGN AND TECHNOLOGY AT SCHOOL



BACHELOR OF CYBERSECURITY, TORRENS UNIVERSITY

# Get the job!

Secure your future in cyber security by skilling up now

**FIND A MENTOR**  
CareerswithSTEM.com has a whole section dedicated to awesome people working in cyber security. Check out their stories and CVs for all the inspo here: [careerswithstem.com/category/cybersecurity/](https://careerswithstem.com/category/cybersecurity/)

**Electives checklist\***  
\*Choose one or a combination

- ✓ Design and Technology
- ✓ Information Software and Technology (Computing Studies)
- ✓ Software Design and Development
- ✓ Information Processes and Technology
- ✓ Maths

## CHOOSE THIS CAREER IF YOU...

- ✓ Have a knack for solving problems
- ✓ Enjoy working with emerging and smart technology
- ✓ Like to think creatively
- ✓ Are analytical
- ✓ Have an inquisitive mind and enjoy staying on top of the latest trends
- ✓ Love crime drama, human psychology, gaming and solving quizzes

**PRACTICE**  
With a good ol' fashioned hackathon!

A hackathon is where people with different tech skills come together to find solutions to engineering problems as fast as possible. There are plenty of cyber security-based hackathons to take part in too. Bookmark [hackathons.com.au](https://hackathons.com.au) to see what's coming up online or in a city near you.



## APPLY



FOR A TORRENS UNIVERSITY SCHOLARSHIP

## FOLLOW

Torrens University on socials

-  @torrensuni
-  @torrensuni
-  TorrensUni
-  Torrens-University-Australia

## JOIN

Throw yourself into the world of cyber security by getting involved in these!

**Schools Cyber Security Challenges:** skill up in cyber, coding and problem solving before you get to uni! [grollearning.com/a/cyber/](https://grollearning.com/a/cyber/)

**ASD CyberEXP:** find out what a day in the life of five cyber specialists working in the Australian Signals Directorate is like. [asdcyberexp.com.au](https://asdcyberexp.com.au)

## WATCH

- These movies and docs are fascinating and highlight why cyber security professionals are oh-so important!
- The Great Hack (2019)
  - The Imitation Game (2014)
  - Snowden (2016)
  - The Matrix (1999)
  - V for Vendetta (2005)

**QUIZ YOURSELF**  
Which cyber security job is for you? Take the Careers with STEM quiz at [bit.ly/CSjobquiz](https://bit.ly/CSjobquiz)

## EXPLORE



CYBER SECURITY COURSES AT TORRENS UNIVERSITY



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