

# The Significance of Pursuing a Postgraduate Degree in Cyber Security

## Introduction

It is reasonable to assume that the use of data and technology today brings new challenges for protecting privacy, Integrity, and availability of data. The ability to adapt and overcome such challenges is therefore essential.

"Intelligence is the ability to adapt to change" (Johnson, 2014)

Cyber criminality is a profitable industry that has been on the rise for years. The methods which are employed by cybercriminals are becoming more sophisticated. such as the use of AI (artificial intelligence) advanced hacking tools, tools like GhostGPT or set of tools in Linux Kali can be leveraged by Individuals to launch attacks more efficiently with minimal technical expertise.

(Lusthaus, 2018)

This essay's aim is to demonstrate the importance of continuous learning and development. The author's experience and additional examples from other sources on the internet will be used to support this argument. In addition to explaining the concept behind the Cyber Security program's modules, which consists of seven modules and one major project. The essay will also explain the reasons behind this postgraduate qualification and its potential benefit for society.

## About the Author

The author is an IT and security expert with years of experience working in international and intercultural organizations. He holds the CISSP®, CC®, CISM®, and CRISC® certifications from ISC<sup>2</sup>® and ISACA®, as well as the ITIL® and PRINCE2® certifications from AXELOS®. He has also studied for the EC-Council® C|EH® v12. Additionally, he has earned certificates in data privacy from Harvard Business School and in AI for cybersecurity from Johns Hopkins University. He is applying for the online postgraduate cyber security program at the University of Essex.

## Cyber security Evolution

Due to technological advancement, cyber threats are changing rapidly and becoming more sophisticated. When hackers exploit weaknesses, exploitation of such has a negative effect on, one, few or all aspects of the CIA triad, such as confidentiality, integrity, and availability of society. Therefore, experts must develop the necessary skills and ethics to be able to protect society against such threats.

To stay ahead, cyber security experts must constantly expand their skill set and knowledge in areas like cyber security, as well as in other areas, such as project management, IT service management, and more domains, which may not necessarily be directly part of cyber security, nevertheless, such skills plays a crucial in support security functions, Understanding how these functions support a better outcome, is crucial.

## Postgraduate programme at the University of Essex

The University of Essex's online postgraduate program in Cyber Security consists of seven modules and one major project. The total of 180 points is required. The following section lists the modules from a high-level overview of each one and a brief description:

- **Computing:** A considerable portion of any illegal cyber activity is conducted using computers. It is therefore crucial for students to develop a comprehensive understanding of computer systems to effectively identify, prevent and report potential illegal activities involving computers.

(Griffith, 1990)

- **Advanced Object-Oriented Design and Programming:** Identifying weaknesses in computer code plays a key role in the industry. It is important to be able to detect and prevent such weaknesses before and during operation. Malicious code, software vulnerabilities and more are, can be identified and addressed using code analysis, among other methods. Understanding computer programming is therefore crucial.

- **Network Security:** In today's globalized environment, networks are the backbone of communication. Networks are fundamental to keeping modern operations and data transmission up and running.
- **Digital Forensics and Cyber Law:** It is crucial to identify crimes and hold those who commit such accountable. Therefore, understanding the relevant laws and conformity, as well as skills in forensic evidence collection, such as the maintenance of the chain of custody, are essential.
- **The Human Factor:** Threat actors are using social engineering methods to target victims and to gain unauthorized access to data. It is therefore essential to defend and combat such methods using education and awareness.
- **Security and Risk Management:** Risk management can be defined as a series of measures employed to deal with threats in a methodical and effective manner with the aim of reducing risk to an acceptable level. Understanding such methodologies is the key for protection.
- **Research Methods and Professional Practice:** New challenges are constantly emerging. Research and professional practice help the industry to develop new methods to deal with such challenges.

- A Major Project: The purpose of this project is to demonstrate that students have acquired the necessary expertise, critical thinking, and skills necessary to earn the postgraduate degree.
- Effective cyber security leadership requires a good foundation for managing, designing, and leading such activities. This requires continues research, improvement, critical thinking, and technical skills. From the author's experience, these concepts enhance one's ability to become an expert and a leader. The University of Essex has the expertise to deliver such a higher quality education and equip with the required expertise.

(University of Essex, 2020)

## Conclusion

By judging the threat landscape and events today, it is reasonable to conclude that the development of new methods is essential to combat cybercrime threats. Candidates applying for the programme at the University of Essex must demonstrate commitment to the programme academic and professional development. Students dedicated themselves to learning. Obtaining the postgraduate degree at the distinguished University of Essex Online would provide individuals with the right education to contribute to the ongoing effort to safeguard society.

## References

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