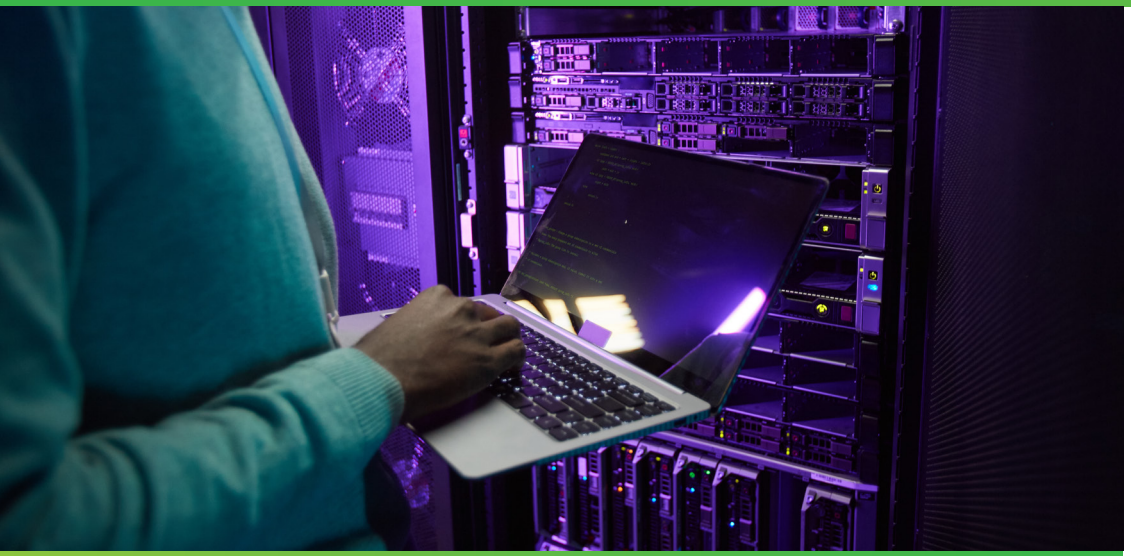

CAREER OPPORTUNITIES

1. Cybersecurity Analyst
2. Information Security Manager
3. Ethical Hacker (Penetration Tester)
4. Security Consultant
5. Chief Information Security Officer (CISO)
6. Digital Forensics Analyst
7. Network Security Engineer
8. Cloud Security Specialist
9. Security Operations Center (SOC) Analyst
10. IT Risk Analyst
11. Compliance and Security Auditor

CONTACTS

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Master of Science in **Information Security**

USIU-Africa is accredited in Kenya by the Commission for University Education (CUE) & the United States of America by WASC Senior College and University Commission respectively.

PROGRAM DESCRIPTION

The goal of the Master of Science in Information Security (MSc. ISEC) programme is to prepare the graduates for the intellectual, analytical and practical challenges of a career in Information Security. The MSc. ISEC programme will utilize an active, experiential learning environment that prepares students to apply the acquired knowledge of information security, for the betterment of organizational operations and society at large. It will contribute to the university mission outcomes which are higher order thinking; literacy; global understanding and multicultural perspective; preparedness for career; community service; and leadership and ethics.

LEARNING OUTCOMES

Upon completion of the Master of Science in Information Security program, students will be able to:

1. Assess new developments in information security threats, technologies and controls.
2. Conduct a forensic audit on a range of information security breaches.
3. Implement cryptographic enabled mechanisms to counter a range of information security breaches.
4. Design network defense solutions to counter cyber threats in modern organizations' networks and systems.
5. Analyze strategic information systems security governance and management in organizations.
6. Execute scholarly information security research, communicate effectively, and develop professional skills in information security discipline.

DEGREE REQUIREMENTS

54 UNITS

CORE COURSES			49.5 UNITS
ISC	6110	Network Security and Management	3 Units
ISC	6120	Intrusion Detection and Prevention	3 Units
ISC	6140	IT Security Techniques and Incident Handling	3 Units
ISC	6210	Software Security	4.5 Units
ISC	6220	Advanced Cryptography	3 Units
ISC	6230	Information Security Auditing and Compliance	3 Units
ISC	6310	Digital Forensics	4.5 Units
ISC	6320	Ethical Issues in Information Security	4.5 Units
ISC	6330	Information Security Governance and Management	3 Units
ISR	6410	Research Methods in Computer Science	3 Units
ISR	6420	Modern Issues in Information Security (Special Topics Course)	3 Units
ISC	6430	Security architecture for cloud computing	3 Units
ISR	6890	Research Thesis I (Proposal Stage)	3 Units
ISR	6892	Research Thesis II (Experimentation/field)	3 Units
ISR	6894	Research Thesis III (Thesis writing and defense)	3 Units

ELECTIVE COURSES (Choose one)			4.5 UNITS
ISE	6440	Reverse Engineering and Malware Analysis	4.5 Units
ISE	6450	Vulnerability Assessment and Penetration Testing	4.5 Units

Repeating courses

A maximum of 2 courses may be repeated. No course may be taken more than twice (the original and one subsequent registration) without approval from the Dean.

Project

Graduate students are required to be continously enrolled during every term while their project remains incomplete.

Degree Completion Timeline

The maximum amount of time for completing a Graduate degree is 4 (four) years. An approved Leave of Absence does not change the time limits.