Information Security in Computer Forensics (Professional Certificate)

The post-bachelor professional certificate in Information Security in Computer Forensics will provide students with the necessary competencies to be leaders in the design, implementation, evaluation, and troubleshooting of security systems.

All those interested in belonging to this program must be admitted to the University and comply with the admission rules established in the catalog.

In addition, to be admitted to the program it is required:
Possess a bachelor's degree in computers, networks, or management information systems from a duly accredited institution.

Objectives

The Professional Certificate in Information Security in: Computer Forensics has the following objectives:
1. Design secure information systems for a company or organization.
2. Assess the impacts on information security generated by new technologies.
3. Apply the methodologies to the processes related to the execution of information systems audits.
4. Apply Use digital evidence to perform forensic audits.
5. Argue actively in research groups related to information security.
6. Integrate into practice the ethical principles that guide the profession.

Competencies Profile of Graduates

The program is designed to develop the skills that allow the student to:

Knowledge

1. Know the best practices, trends, and tools to mitigate the risks associated with the different information technologies.
2. Identify the security services necessary for modern information systems.
3. Know the techniques associated with the investigation of computer crimes.

Skills

1. Design strategic information security plans in any organization.
2. Evaluate security incidents and recommend computer security solutions that comply with current regulations that apply to the organization.
3. Apply adequate methodologies to guarantee the continuity of the organization's operations.
4. Apply the federal and state rules of evidence and procedural standards that govern the investigation of computer crimes.

Attitudes

1. Value professional, ethical and legal behavior.

Program is authorized to be offered online.
TOTAL COST OF PROFESSIONAL CERTIFICATE

Tuition	$4,086
Fees	$1,125
Books	$456
Supplies	$1,300
Total	$6,967

REQUIREMENTS FOR THE PROFESSIONAL CERTIFICATE IN INFORMATION SECURITY IN COMPUTER FORENSICS

Core Course Requirements 18 credits

Total 18

Core Course Requirements - 18 credits

ISCF 5010	Network Security Design, Implementation and Assessment	3
ISCF 5020	Principles of Security and Privacy in Information	3
ISCF 5030	Legal and Ethical Aspects of Computer Forensics	3
ISCF 5040	Disaster Recovery Plans in Information Technologies	3
ISCF 5050	Computer Networks Audit	3
ISCF 5060	Forensic Investigation	3

Major and Other Course Descriptions and Resources (Information Security in Computer Forensics)

ISCF 5010 NETWORK SECURITY DESIGN, IMPLEMENTATION AND ASSESSMENT
Analysis of the fundamentals of network security. Emphasis on the design, implementation and assessment of plans that guarantee information security. Analysis of exposure, vulnerability and risk management in companies and countermeasures to mitigate them. Study of new trends in security and their importance to prevent disasters.

3 credits

VARGAS-MOYA, EDGARDO. Assistant Professor. B.S. in Computer Science Engineering, University of Puerto Rico, Mayaguez Campus; M.S. in Open Information System, Inter American University, Metropolitan Campus; Ph.D. in Information Technology, Capella University.

Senft, S., Gallegos, F., & Davis, A. (2019). *Information Technology Control and Audit.* (5th ed.). CRC Press.

ISCF 5020 PRINCIPLES OF SECURITY AND PRIVACY IN INFORMATION
Analysis of the different types of security with an emphasis on physical, computer and network security. Identification of common threats and attacks to information systems including unintentional damage, identity theft, malicious software, junk mail (spam), and the defensive measures used to protect against them.

3 credits

LOPEZ, JUAN. Associate Professor. B.S. in Biology, University of Puerto Rico, Mayaguez Campus; M.S. in Computer Science, Evansville University.

Boyle, R. & Panko, R. (2021). *Corporate Computer Security.* (5th ed.). Pearson.

ISCF 5030 LEGAL AND ETHICAL ASPECTS OF COMPUTER FORENSICS
Examination of legal and ethical concepts in the context of computer forensics. Application of federal and state rules of evidence and procedural rules in the investigation of computer crimes. Emphasis on the application of ethical and legal principles in the collection of evidence, testimonies and in the writing of computer forensics.

3 credits

RODRIGUEZ-ROMAN, SAMUEL. Assistant Professor. B.S. in Computer Science, Inter American University of Puerto Rico; M.S. in Computer Science – Networks and Security, Inter American University of Puerto Rico; Ph.D. in Business Administration, Northcentral University, Arizona.

Spinello, R. (2021). *Cyberethics: Morality and Law in Cyberspace*. (7th ed.). Jones & Bartlett Learning.

ISCF 5040 DISASTER RECOVERY PLANS IN INFORMATION TECHNOLOGIES
Analysis of risks in organizations. Application of methodologies in the design and development of a computer disaster recovery plan. Evaluation of the impact of said plan to guarantee the continuity of operations.

3 credits

VARGAS-MOYA, EDGARDO. Assistant Professor. B.S. in Computer Science Engineering, University of Puerto Rico, Mayaguez Campus; M.S. in Open Information System, Inter American University, Metropolitan Campus; Ph.D. in Information Technology, Capella University.

Whitman, M. E., Mattord, H. J., & Green, A. (2021). *Principles of Incident Response and Disaster Recovery*. (3rd ed.). Course Technology.

ISCF 5050 COMPUTER NETWORKS AUDIT
Analysis of the fundamentals of audit and control of information technology (IT). Evaluation of the rules that govern information technology systems and their application.

3 credits

GONZALEZ-CARRIL, EDWIN. Part-Time Professor of Business Administration. B.B.A. in Business Administration, University of Puerto Rico; M.B.A. in Management in Information Systems, Inter American University of Puerto Rico; D.B.A. in Management in Information Systems, Turabo University.

Gallegos, F., Manson, D. P., Senft, S., & Gonzalez, C. (2019). *Information Technology Control and Audit.* (5th ed.). Auerbach Publishers.

ISCF 5060 FORENSIC INVESTIGATION
Analysis of the tools, techniques, and procedures of forensic investigation. Evaluation of security incidents in organizations.

3 credits

NAVARRO, JOSE. Assistant Professor. B.S. in Computer Science Engineering, University of Puerto Rico; M.S. in Computer Engineering, University of Puerto Rico; M.S. in Electrical Engineering, University of Puerto Rico.

Hayes, D. R. (2021). *A Practical Guide to Computer Forensics Investigations*. (2nd ed.). Pearson IT Certification PTG.