

# Info Security/Assurance (ISA) Courses

## **ISA5005 Network Fundamentals**

This course is a foundational graduate-level course in computer networks. The course offers a comprehensive review of the application, transport, network and link layers of the OSI protocol stack. Advanced topics, including network management, traffic engineering and router configuration, are also addressed. Network protocols are studied in detail with an emphasis on learning to read RFCs within the context of the structure, FSM, configuration protocol learning paradigm.

Offered at Online, Providence

3 Semester Credits

## **ISA5020 Foundations of Information Security Management**

This course provides a conceptual overview of information security management and information assurance (IA). Topics covered at an introductory level include information security and information assurance principles, information technology security issues, and security technologies and processes. Governance issues include policy, law, ethics and standards, as well as organizational models and communications. Risk management issues include risk assessment, threats, vulnerabilities and security life-cycle management.

Offered at Online, Providence

3 Semester Credits

## **ISA5085 Principles of Programming**

This course teaches students without a background in computer science or software engineering the concepts necessary to complete the graduate program in Information Security/Assurance. This course is designed to deliver an understanding of core algorithmic concepts (e.g., control structures, assignment, decision structures, mathematical/Boolean operations, etc.), an introduction to structured and object-oriented computer programming languages, compilers, interpreters and virtual machine environments. Students design algorithms to solve problems and learn how to translate these algorithms into working computer programs using appropriate languages and runtime environments.

Offered at Online, Providence

3 Semester Credits

## **ISA6050 Business Continuity Planning**

This course focuses on the need for and ability to conduct business continuity planning. Emphasis is on planning for the inevitable system failure, network fault or security breach in the current technological environment, given industry's heavy reliance on technology.

Prerequisite(s): ISA5020, completion of foundation courses.

Offered at Online, Providence

3 Semester Credits

## **ISA6060 Risk Management and Incident Response**

This course is directed toward students interested in understanding how large-scale complex risk can be quantified, managed and architected. Students learn to identify the business and technical issues, regulatory requirements and techniques to measure and report risk across a major organization. Students explore techniques used to mitigate, minimize and transfer risk. This course also provides a foundation in disaster recovery principles, addressing concepts such as incident disaster recovery planning, developing policies and procedures, roles and relationships of various members of an organization, "swim lane" diagramming, implementation of the plan, testing and rehearsal of the plan, planning disaster recovery resources, and linking risk management incident response to large-scale disaster recovery implementations planning; developing policies and procedures; roles and relationships of various members of an organization; "swim lane" diagramming, implementation of the plan; testing and rehearsal of the plan; planning disaster recovery resources, linking risk management incident response to large scale disaster recovery implementations.

Prerequisite(s): ISA5020, completion of foundation courses.

Offered at Online, Providence

3 Semester Credits

## **ISA6070 Cyber Science and IT Business Operations**

This course focuses on IT auditing processes, cyber threats and their effect on common infrastructures, the properties and applications of specific loss count and loss severity distributions, actuarial modeling, and forensic accounting techniques. Topics include the planning of security provisions, countermeasures and deployment, as well as understanding the impact of attacks (evidence gathering and investigation), which depend on a combination of technology and business acumen. Certain estimation methods like percentile matching, maximum likelihood estimation, Bayesian estimation and credibility theory are also introduced.

Prerequisite(s): ISA5020, completion of foundation courses.

Offered at Online, Providence

3 Semester Credits