

ITT Technical Institute
IT360
Networking Security I
Onsite Course

SYLLABUS

Credit hours: 4

Contact/Instructional hours: 50 (30 Theory Hours, 20 Lab Hours)

Prerequisite(s) and/or Corequisite(s):

Prerequisite: IT220 Network Standards and Protocols or equivalent

Course Description:

This course covers assessing and managing risks to information systems security and identifying activities involved in the process of risk management for an organization in association with techniques and tools of intrusion detection.

Course Summary

Major Instructional Areas

1. Risk management basics
2. Risk assessment plan
3. Risk mitigation plan
4. Cost and benefit analysis
5. Business continuity plan
6. Disaster recovery plan

Course Objectives

1. Explain the basic concepts of and need for risk management.
2. Identify compliancy laws, standards, best practices, and policies of risk management.
3. Describe the components of an effective organizational risk management program.
4. Describe techniques for identifying relevant threats, vulnerabilities, and exploits.
5. Identify risk mitigation security controls.
6. Describe concepts for implementing risk mitigation throughout an organization.
7. Perform a business impact analysis for a provided scenario.
8. Create a business continuity plan (BCP) based on the findings of a given risk assessment for an organization.
9. Create a disaster recovery plan (DRP) based on the findings of a given risk assessment for an organization.
10. Create a Computer Incident Response Team (CIRT) plan for an organization in a given scenario.

SCANS Objectives

SCANS is an acronym for Secretary's Commission on Achieving Necessary Skills. The committee, appointed by the National Secretary of Labor in 1990, created a list of skills and competencies that continue to be a valuable resource for individuals developing their careers in a high-tech job market. For more information on the SCANS objectives, visit The U.S. Department of Labor Employment and Training Administration: www.doleta.gov.

Learning Materials and References

Required Resources

| Textbook Package | New to this Course | Carried over from Previous Course(s) | Required for Subsequent Course(s) |
|--|--------------------|--------------------------------------|-----------------------------------|
| Gibson, Darril. <i>Managing Risk in Information Systems</i> . 1 st ed. Sudbury, MA: Jones & Bartlett, 2010. | ■ | | |
| Printed Student Lab Manual | ■ | | |

Recommended Resources

Books, Professional Journals

Please use the following author's names, book/article titles and/or keywords to search in the ITT Tech Virtual Library for supplementary information to augment your learning in this subject:

- Ole Hanseth, et al., *Risk, Complexity, and ICT*.

Search in:

Books > Books 24x7

Periodicals . EbscoHost

Other References

- COBIT
This URL contains information regarding COBIT from the ISACA.
<http://www.isaca.org/Template.cfm?Section=COBIT6&Template=/TaggedPage/TaggedPageDisplay.cfm&TPLID=55&ContentID=7981> (accessed on April 28, 2010)
- CIPA
This Website contains information on the Children's Internet Protection Act from Federal Communications Commission.
<http://www.fcc.gov/cgb/consumerfacts/cipa.html> (accessed on April 28, 2010)
- DIACAP
Information regarding the Department of Defense Information Assurance Certification and Accreditation Process from the Defense Information Systems Agency
<http://iase.disa.mil/diacap/> (accessed on April 28, 2010)

- FERPA
This URL provides information regarding the Family Educational Rights and Privacy Act from the U.S. Department of Education.
<http://ed.gov/policy/gen/reg/ferpa/index.html> (accessed on April 28, 2010)

- FISMA
This URL contains actual final version of the Federal Information Security Management Act.
<http://csrc.nist.gov/drivers/documents/FISMA-final.pdf> (accessed on April 28, 2010)

- GLBA
This URL provides information regarding the Gramm-Leach Bliley Act from the Federal Trade Commission.
<http://www.ftc.gov/privacy/privacyinitiatives/glbact.html> (accessed on April 28, 2010)

- Health Information Privacy
This URL provides information regarding HIPPA from the U.S. Department of Health and Human Services.
<http://www.hhs.gov/ocr/privacy/> (accessed on April 28, 2010)

- ITIL
This Website is an official site of for the Information Technology Infrastructure Library from the OGC which contains information on ITIL and provides a cohesive set of best practice, drawn from the public and private sectors internationally.
<http://www.itil-officialsite.com/home/home.asp> (accessed on April 28, 2010)

- PCI
This Website is an official site of the PCI Security Standards Council which provides details on security standards.
<https://www.pcisecuritystandards.org/index.shtml> (accessed on April 28, 2010)

- Risk Management Association
This Website contains information on the RMA which is a non-profit organization focusing on all aspects of risk management throughout the enterprise.
<http://www.rmahq.org/RMA/default.htm> (accessed on April 28, 2010)
- Risk Management Guide for Information Technology Systems
This URL contains NIST recommendations for the U.S. Department of Commerce on Risk Management for Information Technology Systems.
<http://csrc.nist.gov/publications/nistpubs/800-30/sp800-30.pdf> (accessed on April 28, 2010)
- SOX
This Website provides detailed information on the Sarbanes-Oxley Act of 2002.
<http://www.soxlaw.com/> (accessed on April 28, 2010)
- TechRepublic
This Website contains articles, videos, pictures, white papers, webcasts, and downloads material on risk management.
<http://techrepublic.com.com/> (accessed on April 28, 2010)

NOTE: All links are subject to change without prior notice.

Information Search

Use the following keywords to search for additional online resources that may be used for supporting your work on the course assignments:

COBIT

CIPA

DIACAP

FERPA

FISMA

GLBA

Health Information, Privacy

ITIL

PCI

Risk Management Association

Risk Management Guide for Information Technology Systems

SOX

TechRepublic

Course Plan

Instructional Methods

This course is designed to promote learner-centered activities and support the development of cognitive strategies and competencies necessary for effective task performance and critical problem solving. The course utilizes individual and group learning activities, performance-driven assignments, problem-based cases, projects, and discussions. These methods focus on building engaging learning experiences conducive to development of critical knowledge and skills that can be effectively applied in professional contexts.

Suggested Learning Approach

In this course, you will be studying individually and within a group of your peers. As you work on the course deliverables, you are encouraged to share ideas with your peers and instructor, work collaboratively on projects and team assignments, raise critical questions, and provide constructive feedback.

Use the following advice to receive maximum learning benefits from your participation in this course:

| DO | DON'T |
|---|--|
| <ul style="list-style-type: none"> ▪ Do take a proactive learning approach ▪ Do share your thoughts on critical issues and potential problem solutions ▪ Do plan your course work in advance ▪ Do explore a variety of learning resources in addition to the textbook ▪ Do offer relevant examples from your experience ▪ Do make an effort to understand different points of view ▪ Do connect concepts explored in this course to real-life professional situations and your own experiences | <ul style="list-style-type: none"> ▪ Don't assume there is only one correct answer to a question ▪ Don't be afraid to share your perspective on the issues analyzed in the course ▪ Don't be negative towards the points of view that are different from yours ▪ Don't underestimate the impact of collaboration on your learning ▪ Don't limit your course experience to reading the textbook ▪ Don't postpone your work on the course deliverables – work on small assignment components every day |

Course Outline

| Unit # | Unit Title | Assigned Readings | Graded Activities | | | |
|---|--|--|-------------------|-----|--|--|
| | | | Grading Category | # | Activity Title | Grade Allocation (% of all graded work) |
| 1 | Risk Management Fundamentals | <i>Managing Risk in Information Systems:</i> <ul style="list-style-type: none"> ▪ Chapter 1 ▪ Chapter 2 | Quiz | 1.1 | An open book quiz over the assigned reading of Unit 1. | 1 |
| | | | Lab | 1.2 | Identifying Threats and Vulnerabilities | 2 |
| | | | Assignment | 1.3 | Application of risk management techniques | 3 |
| Course Project and associated deliverables are introduced. | | | | | | |
| 2 | Compliance Laws, Standards, and Best Practices | <i>Managing Risk in Information Systems:</i> <ul style="list-style-type: none"> ▪ Chapter 3 | Quiz | 2.1 | Quiz 2.1 | 1 |
| | | | Lab | 2.2 | COBIT Framework | 2 |
| | | | Assignment | 2.3 | PCI DSS and the seven domains | 3 |
| 3 | Risk Management Planning | <i>Managing Risk in Information Systems:</i> <ul style="list-style-type: none"> ▪ Chapter 4 | Quiz | 3.1 | Quiz 3.1 | 1 |
| | | | Lab | 3.2 | Risk management scope/boundaries | 2 |
| | | | Discussion | 3.3 | Risk Management Process | 5 |
| 4 | Concepts of Risk Assessment | <i>Managing Risk in Information Systems:</i> <ul style="list-style-type: none"> ▪ Chapter 5 ▪ Chapter 6 | Quiz | 4.1 | Quiz 4.1 | 1 |
| | | | Lab | 4.2 | Risk Assessment Pre-Planning | 2 |
| | | | Assignment | 4.3 | Risk Assessment Approaches | 3 |
| | | | Project | 4.4 | Risk Management Plan Project Part 1 | 5 |

| Unit # | Unit Title | Assigned Readings | Graded Activities | | | |
|--------|-----------------------------------|---|-------------------|-----|---|------------------------|
| | | | Grading Category | # | Activity Title | Grade Allocation |
| | | | | | | (% of all graded work) |
| 5 | Key Components of Risk Assessment | <i>Managing Risk in Information Systems:</i> <ul style="list-style-type: none"> ▪ Chapter 7 ▪ Chapter 8 ▪ Chapter 9 | Quiz | 5.1 | Quiz 5.1 | 1 |
| | | | Lab | 5.2 | Perform a Risk Assessment | 2 |
| | | | Discussion | 5.3 | Risk Assessment and Risk Mitigation control | 5 |
| 6 | Strategies for Mitigating Risk | <i>Managing Risk in Information Systems:</i> <ul style="list-style-type: none"> ▪ Chapter 10 ▪ Chapter 11 | Quiz | 6.1 | Quiz 6.1 | 1 |
| | | | Lab | 6.2 | Risk Mitigation | 2 |
| | | | Project | 6.3 | Risk Assessment Plan | 3 |
| 7 | Business Impact Analysis | <i>Managing Risk in Information Systems:</i> <ul style="list-style-type: none"> ▪ Chapter 12 | Quiz | 7.1 | Quiz 7.1 | 1 |
| | | | Lab | 7.2 | Business impact analysis | 2 |
| | | | Project | 7.3 | Risk Mitigation Plan | 3 |
| 8 | Business Continuity Planning | <i>Managing Risk in Information Systems:</i> <ul style="list-style-type: none"> ▪ Chapter 13 | Quiz | 8.1 | Quiz 8.1 | 1 |
| | | | Lab | 8.2 | Reviewing business continuing planning techniques | 2 |
| | | | Project | 8.3 | Risk Management Plan Project Part 2 | 5 |

| Unit # | Unit Title | Assigned Readings | Graded Activities | | | |
|--------|--|--|-------------------|------|---------------------------------------|------------------------|
| | | | Grading Category | # | Activity Title | Grade Allocation |
| | | | | | | (% of all graded work) |
| 9 | Disaster Recovery Planning | <i>Managing Risk in Information Systems:</i> <ul style="list-style-type: none"> ▪ Chapter 14 | Quiz | 9.1 | Quiz 9.1 | 1 |
| | | | Lab | 9.2 | Disaster recovery techniques | 2 |
| | | | Project | 9.3 | Conducting a business continuity plan | 3 |
| 10 | Structuring Computer Incident Response Team and Plan | <i>Managing Risk in Information Systems:</i> <ul style="list-style-type: none"> ▪ Chapter 15 | Quiz | 10.1 | Quiz 10.1 | 1 |
| | | | Lab | 10.2 | CIRT planning techniques | 2 |
| | | | Project | 10.3 | Disaster Recovery Plan | 2 |
| 11 | Course Review and Final Exam | N/A | Project | 11.1 | Project: Risk Management Plan | 10 |
| | | | Exam | 11.2 | Final Exam | 20 |

Evaluation and Grading

Evaluation Criteria

The graded assignments will be evaluated using the following weighted categories:

| Category | Weight |
|--------------|-------------|
| Discussion | 10 |
| Assignment | 9 |
| Lab | 20 |
| Project | 31 |
| Quiz | 10 |
| Exam | 20 |
| TOTAL | 100% |

Grade Conversion

The final grades will be calculated from the percentages earned in the course, as follows:

| Grade | Percentage | Credit |
|-------|------------|--------|
| A | 90–100% | 4.0 |
| B+ | 85–89% | 3.5 |
| B | 80–84% | 3.0 |
| C+ | 75–79% | 2.5 |
| C | 70–74% | 2.0 |
| D+ | 65–69% | 1.5 |
| D | 60–64% | 1.0 |
| F | <60% | 0.0 |

Academic Integrity

All students must comply with the policies that regulate all forms of academic dishonesty, or academic misconduct, including plagiarism, self-plagiarism, fabrication, deception, cheating, and sabotage. For more information on the academic honesty policies, refer to the Student Handbook.

(End of Syllabus)