



Integrating IT Security Auditing to IA Curriculum

Zhixiong Chen

zchen@mercy.edu

Cybersecurity, Dept of CS, Mercy College, NY

Agenda



- What
- Why
- How does it fit in Cybersecurity Curriculum
- CBOK
- Course Design Consideration
- Course Samples

Basics



- Management side of Cybersecurity
 - Independent review
 - Validation of controls in places
 - Value-added recommendations
 - Reasonable Assurance
- Principles, Methodologies and frameworks
- Law, Regulations and best practices
- Similar course titles
 - IT Auditing and Compliance
 - Security Policy and Information Assurance
 - Cybersecurity Governance, Compliance and Risk
- Not
 - Digital forensics (computer, network, mobile devices)
 - Legal/social behavior/auditing

Importance



- Employability
- Emphasis on Security and Privacy Engineering
- Connection all the dots learned from various classes

Masters in Cybersecurity



Core Courses

1. Topics in Information Security
2. Computer Forensic
3. Information Assurance and Management
4. Firewall and Intrusion Detection
5. Wireless Network and Security
6. **IT Audit and Compliance**

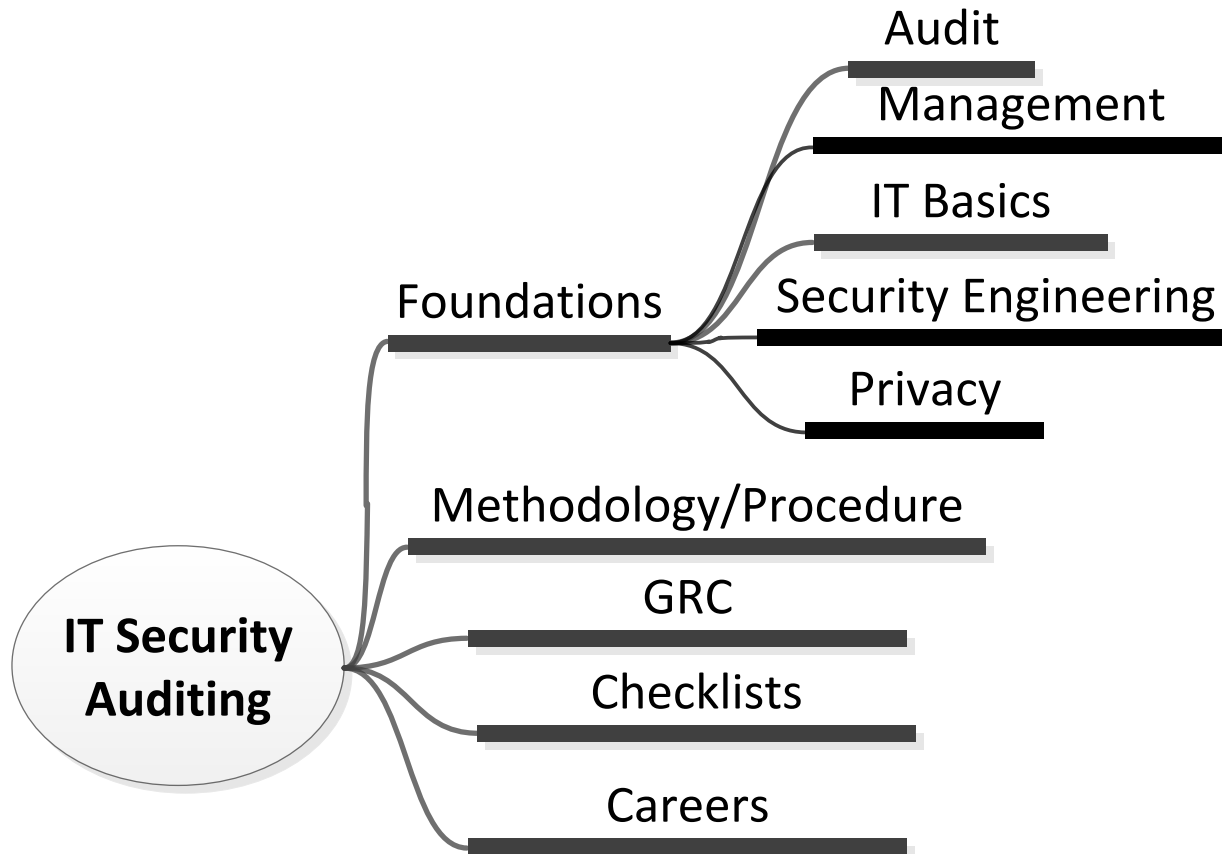
Electives

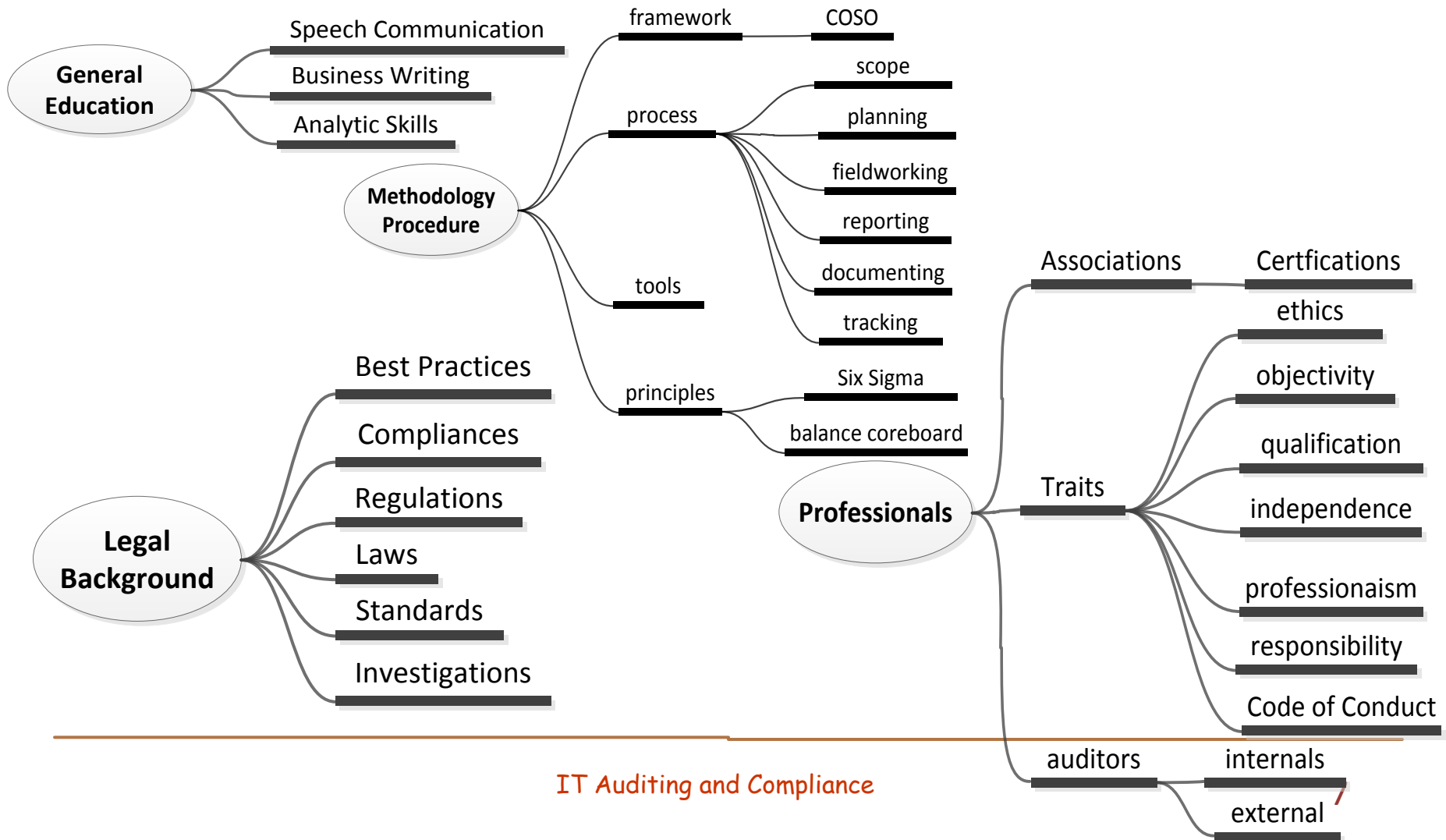
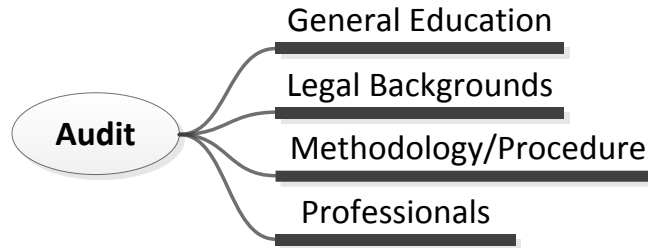
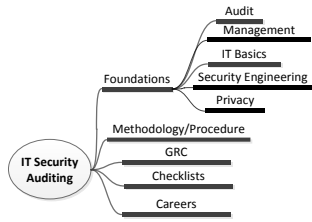
1. Social Implications of Information Security
2. Data Mining and Knowledge Discovery
3. Distributed Database and Security
4. E-Commerce Security
5. Information Security Policies
6. Applied Cryptography
7. Advanced Topics in Security Practice
8. Special Topics in Information Security
9. Independent Study

Options:

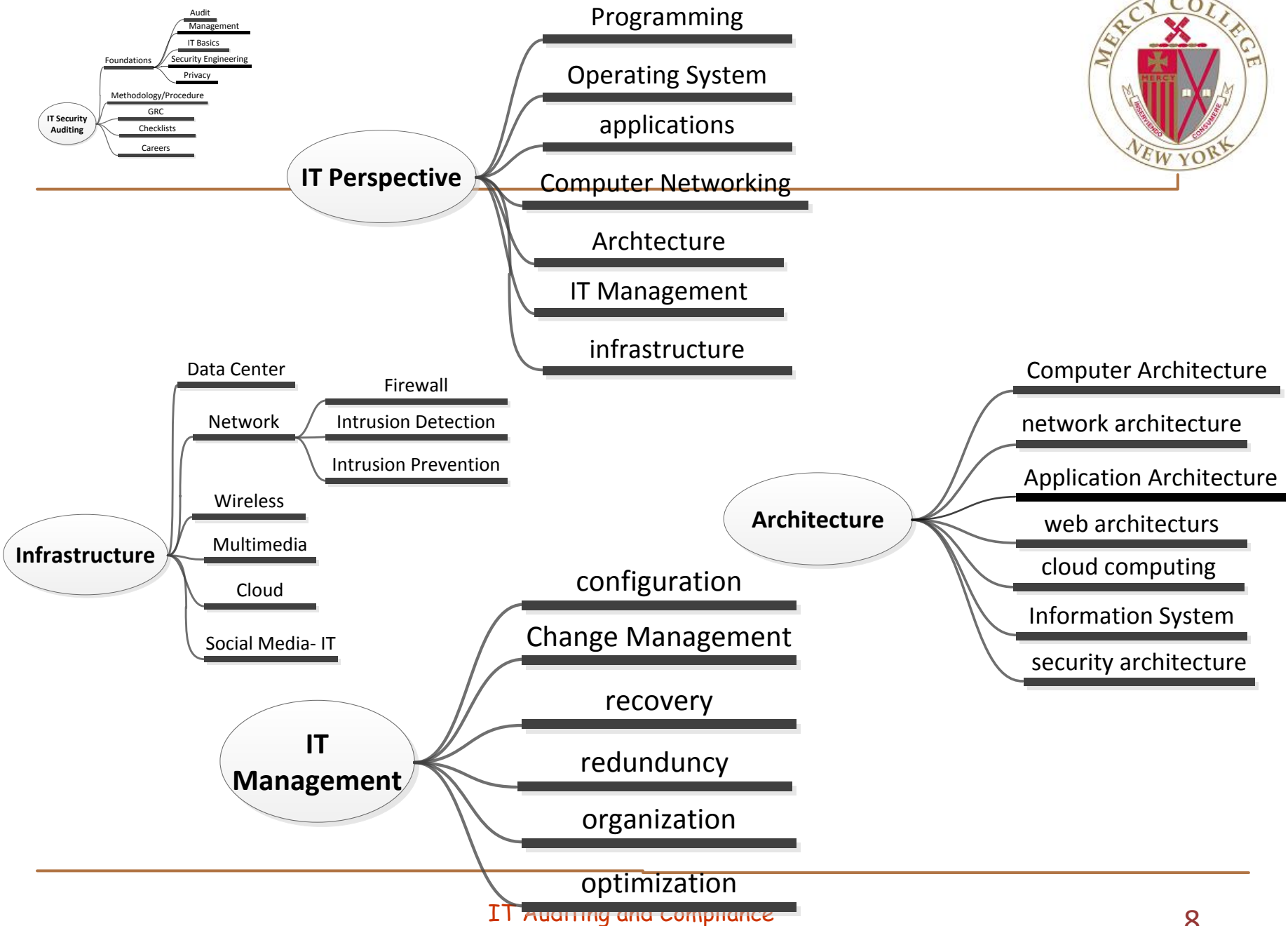
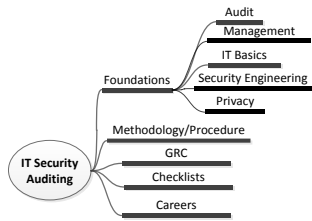
1. All courses (0)
2. Master Project (3)
3. Master Thesis (6)

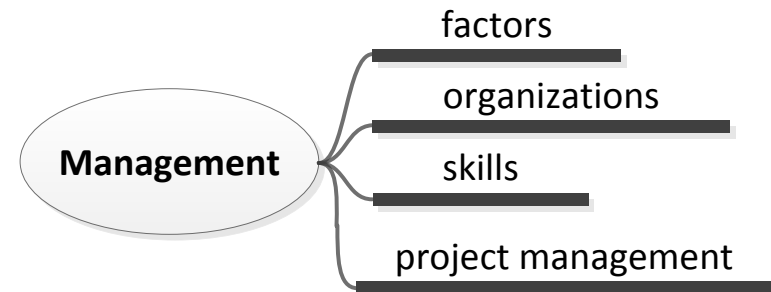
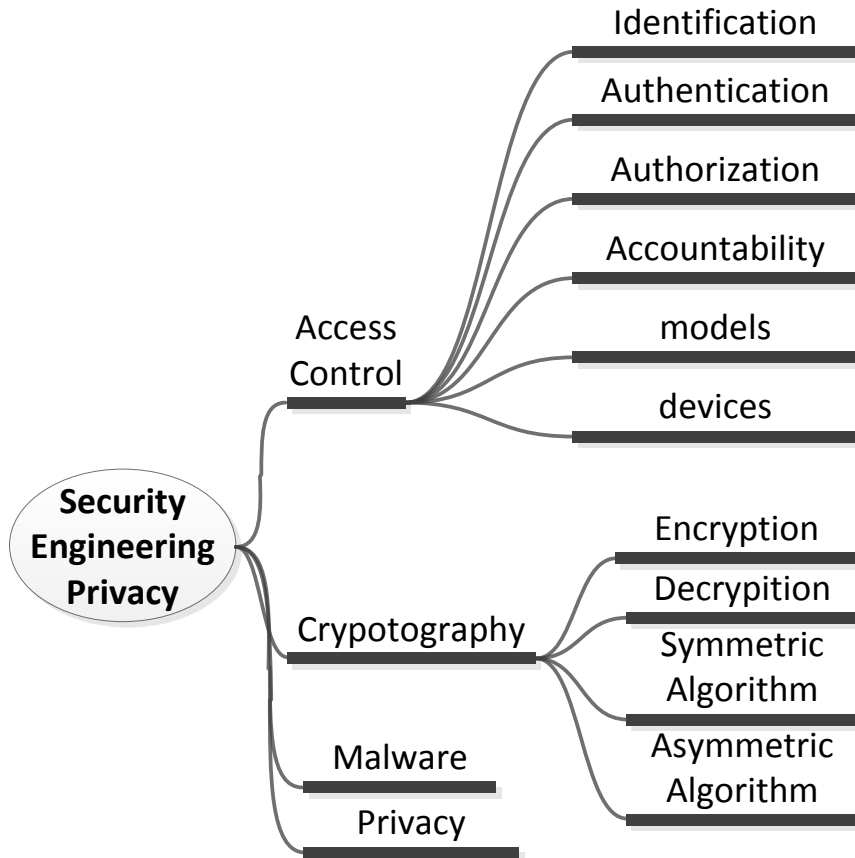
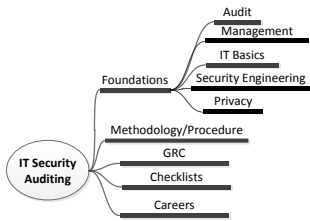
Curriculum Body of K

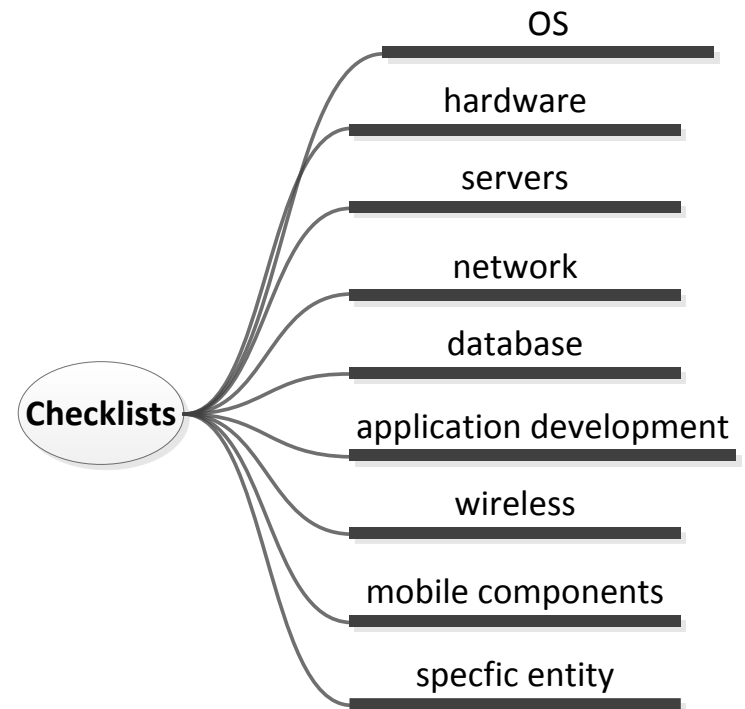
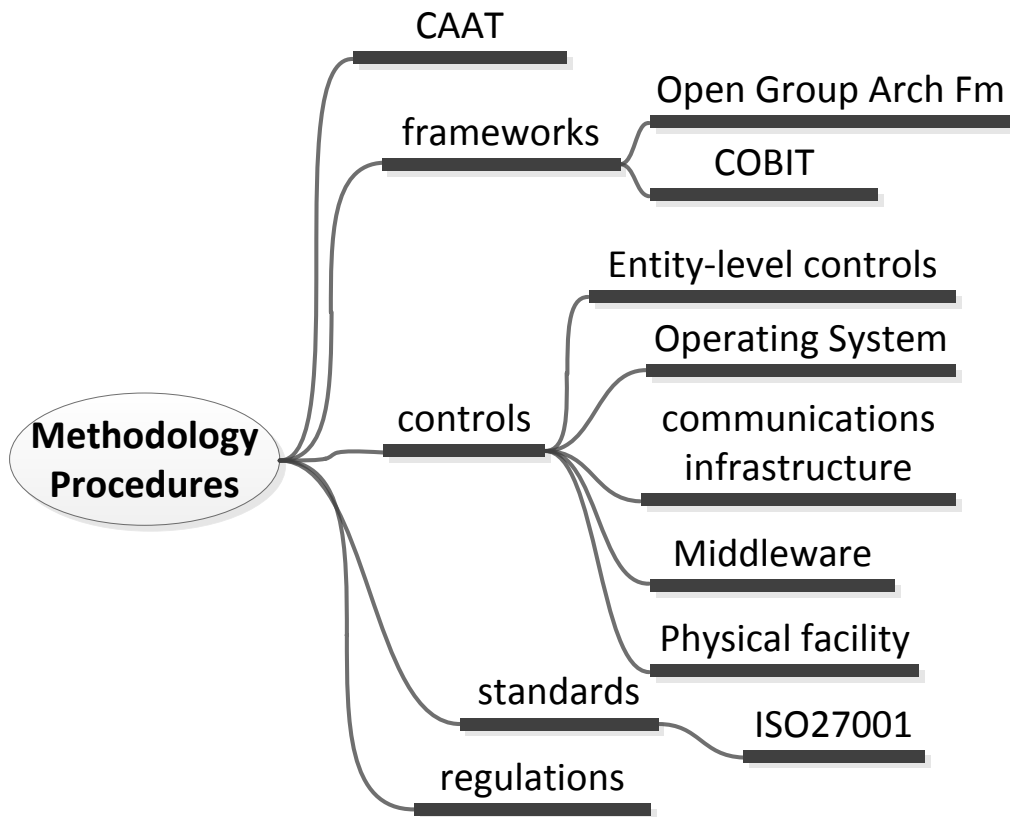
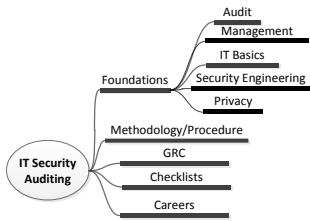


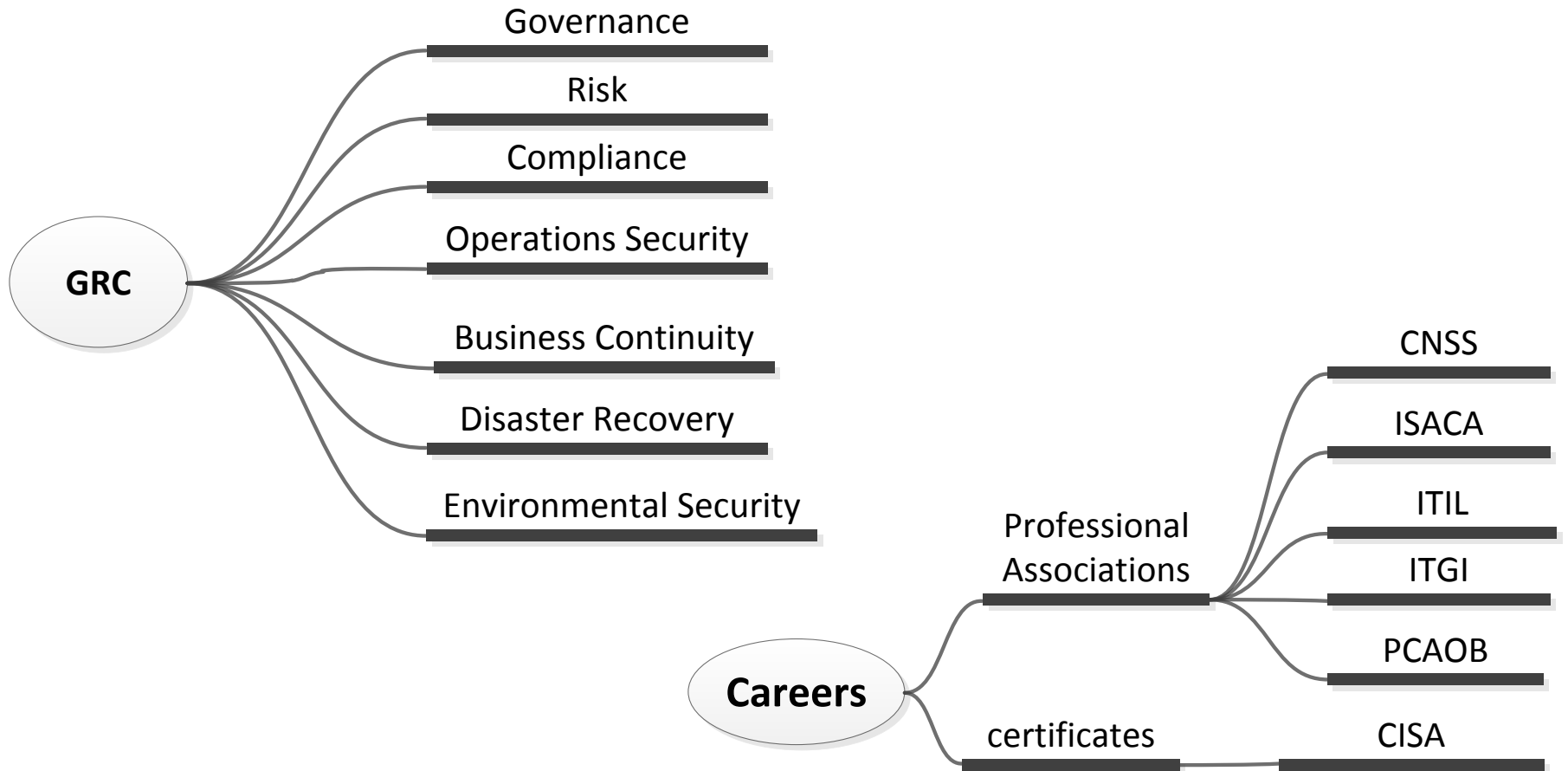
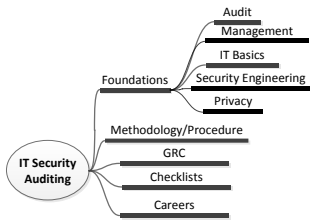


IT Auditing and Compliance









Course Design Consideration



- Host Department
- Objective
- Outcome
- Assessment

Catalogue Description-samples



- Reviews the critical skills and methodologies used to ensure compliance to public and private sector regulatory requirements
- Covers general auditing process and IT auditing techniques such as auditing database and data center, network infrastructure, operating systems, web applications, mobile devices, and IT projects.
- Introduces IT audit frameworks, standards and regulations such as COSO, CoBIT, ISO27001, Sarbanes-Oxley Act of 2002.
- Analyzes GRC within IT security Auditing

Course Objectives



- To prepare students with critical skills and methodologies used to
- To ensure compliance to public and private sector regulatory requirements;
- To guarantee proper levels of controls, both IT and process level;
- To understand audit frameworks, standards and regulations for IT environment; and
- To gain hands on experience on governance, finance and controls.

Course Outcome



- Understand the purpose of internal and external audit and the general audit process
- Comprehend critical skills and methodologies used to ensure compliance to public and private sector regulatory requirements, especially toward IT environment
- Apply the techniques and policies to real scenarios

Term and Team Project



- Controlled vs Open-ended Environment
- Case Analysis Repository
 - students or public published
 - Standard question format
- Self Learning and Assessment Tool

Project topic selection



Entity Domain

- Your working place
- Your primary care physician (PCP)
- Mercy college student account
- Dobbs Ferry public library
- Convenient stores
- Gas station
- Church
- Nursing home
- more

Technical domain

- Cloud computing
- Assets management
- Digital medical records
- linux operating system,
- windows
- wireless
- Mobile devices
- Window active directory
- Server side scripting languages
- Password
- firewall
- more



Q & A