ITMM 586 SYLLABUS

ITMM 586 Information Technology Auditing

Hours: 3 credit hours / 45 contact hours

Instructor: Ann Rangarajan

Textbook, title, author, and year:
> None. All assigned reading will come from online sources or materials shared by the instructor.

Specific course information:
a. **Catalog description:** Industry standard practices and standards in the auditing of information technology in an organization are addressed, with a particular emphasis on examination of IT governance, assets, controls, and control techniques. Specific areas covered will include the audit process, IT governance, systems and infrastructure life cycle management, IT service delivery and support, protection of information assets, and business continuity and disaster recovery. Students will examine case studies and complete hands-on exercises.
b. **Prerequisites:** None.

Specific goals for the course
a. **Course Outcomes:** The objective of the course is to expose students to the many facets of information technology auditing. We will explore common tasks, challenges, and interactions that information technology auditors face on a recurring basis. Each successful student should be able to demonstrate foundational knowledge and application of the core concepts of information technology auditing, conduct an audit, and deliver an audit report.
b. **Course Student Outcomes:**
   At the conclusion of this course, students will be able to:
   - Recall and describe information technology audit concepts
   - Describe the relationship between information technology governance and information technology auditing
     - Explain why and how information technology audit is important to the governance function
   - Recall and describe key information technology audit roles, both in organizational management and in audit teams
   - Identify and describe representative information technology auditing frameworks
     - Recall and describe in detail the contents of the IT auditing frameworks
   - Apply information technology audit frameworks to problem(s) in information technology
     - Explain the role of information technology auditing in the protection of information technology assets
     - Explain the role of information technology auditing in systems and infrastructure life cycle management
   - Describe the relationship of information technology auditing to business contingency plans
   - Conduct an information technology audit using appropriate industry standards and tools
     - Prepare and deliver an audit report
     - Deliver an information technology audit debrief
   - Summarize and evaluate common industry certifications for information technology audit professionals
     - Recall requirements for certification as an information technology auditor
   - Summarize and critique the ethics of IT auditing

Topics to be covered
a. Introduction and the function of information technology audits
b. Information technology audit and governance
c. Information technology audit roles and responsibilities
d. The information technology audit process
e. Auditing information technology in the context of commonly applied government and industry frameworks
   1. Payment Card Industry Data Security Standard (PCI DSS)
   2. NIST Framework for Improving Critical Infrastructure Cybersecurity (NIST Cybersecurity Framework)
   3. Cybersecurity Maturity Model Certification (CMMC)
      i. NIST SP 800-171 revision 2
      ii. NIST SP 800-171A
      iii. NIST SP 800-172
      iv. NIST SP 800-172A
   4. ISACA Control Objectives for Information and Related Technologies (COBIT)
   5. Sarbanes-Oxley (SOX) compliance and COSO
   6. Service Organization Control Type 2 (SOC 2) and AICPA
f. Application of information technology audit to IT and cybersecurity problems and environments
g. Industry certifications
   1. ISACA Certified Information Systems Auditor (CISA)
   2. Other certifications
h. Ethics of the information technology audit

Each ITM Departmental Syllabus *represents a recent offering of the course. The instructor, textbook(s), course outcomes, and course student outcomes/learning objectives may vary in future semesters.*

June 16, 2023