ITM 303 SYLLABUS

ITM 303 Introduction to Contemporary Operating Systems and Hardware II

Hours: 3 credit hours / 60 contact hours; 30 hours lecture, 30 hours lab

Instructor: Vasilios "Billy" Pappademetriou

Textbook, title, author, and year:
The Official CompTIA A+ Core 2 Student Guide (Exam 220-1002), Pam Taylor and James Pengelly, 2019

Specific course information
  a. **Catalog description:** Introduces features of an advanced operating system, including basic commands, file and directory manipulation, security, and suitability for server applications. Popular and business-focused desktop and mobile device operating systems will be examined, as well as enterprise and open-source server implementations.
  b. **Prerequisites:** ITM 301
  c. **Optional.**

Specific goals for the course
  a. **Program Educational Objectives**
     1. Problem solve and create innovative answers to provide technology solutions for the problems of business, industry, government, non-profit organizations, and individuals.
  b. **Course Outcomes:**
     ITM302 is a foundation course in the basics of computer, device, and server operating system. This serves as a basis for practical studies in other topics in IT. Upon completion, a student should be able to understand, use, and manage industry-standard operating systems.
  c. **Course student outcomes:**
     Upon completion of this course the student should be able to do the following
     - Operating Systems
       o Compare and contrast common operating systems and their purposes.
       o Compare and contrast features of Microsoft Windows versions.
       o Summarize general OS installation considerations and upgrade methods.
       o Use appropriate Microsoft command line & GUI tools, features and Control Panel utilities.
       o Install and configure applications.
       o Configure Microsoft Windows networking on a client/desktop system.
       o Use features and tools of Mac OS and Linux client/desktop operating systems.
     - Security
       o Summarize the importance of physical security measures.
       o Explain logical security concepts.
       o Compare and contrast wireless security protocols and authentication methods.
       o Detect, remove, and prevent malware using appropriate tools and methods.
       o Compare and contrast social engineering, threats, and vulnerabilities.
       o Compare and contrast the differences in basic Microsoft Windows OS security settings
       o Implement security best practices to secure a workstation, mobile device, SOHO wired or wireless devices.
       o Implement appropriate data destruction and disposal methods.
     - Software Troubleshooting
       o Troubleshoot:
         ▪ Microsoft Windows OS.
         ▪ and resolve PC Security issues.
         ▪ Mobile OS and Application issues.
         ▪ Mobile OS and Application Security Issues.
       o Use best practices for malware removal.
     - Operational Procedures
       o Compare and contrast best practices associated with types of documentation.
       o Implement:
         ▪ Change management best practices.
         ▪ Basic disaster prevention and recovery methods.
       o Explain:
         ▪ Common safety procedures/practices.
         ▪ Environmental impacts and appropriate controls.
       o Describe processes for addressing prohibited content/activity, and privacy, licensing, and policy concepts.
       o Use proper communication techniques and professionalism.
       o Identify the basics of scripting.
       o Use remote access technologies.
     - Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline **(ABET Computing Criterion 3.2)**

Topics to be covered
  a. Introduction. IIT Banner, Class basics
  b. Book and Lab setup
  c. Lab - Virtual Machine Lab
  d. Support Operating Systems
  e. Install, Configure, and Maintain an OS
  f. Maintain and Troubleshoot MS Windows
  g. Configure and Troubleshoot Networks
  h. Open Topic/Midterm
  i. Manage Users, Workstations & Shared Resources
  j. Security Concepts
  k. Secure Workstation and Data
  l. Troubleshoot Workstation Security Issues
  m. Support and Troubleshoot Mobile Devices
  n. Implement Operational Procedures

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.*

December 1, 2021