

ETRO 187 : Computer Hardware and OS

Credits: 4

Class Hours: 8 lecture/lab

Recommended: ETRO 18 and ICS 100 or ICS 101.

Description: This course covers the fundamentals of computer hardware, software, and advanced concepts such as security, networking, and responsibilities of an Information Technology (IT) professional. Students who complete this course will be able to describe the internal components of a computer, assemble a computer system, install and configure operating systems, and troubleshoot using system tools and diagnostic software. Students will also be able to connect to the Internet and share resources in a networked environment. This course includes an introduction to mobile devices such as tablets and smartphones and client side virtualization. Hands-on labs are an essential element of the course.

Semester Offered: Fall

Course Student Learning Outcomes (CSLOs):

1. Install, upgrade, navigate, and secure an operating system.
2. Configure computers to securely connect to an existing network.
3. Install and share a printer.
4. Upgrade or replace components of a laptop based on customer needs.
5. Explain and perform preventive maintenance and advanced troubleshooting procedures.
6. Explain and demonstrate good communications skills and professional behavior when working with team members and customers.
7. Perform a step-by-step assembly of a desktop computer and describe the components used.
8. Describe the features and characteristics of mobile devices.
9. Describe and implement basic hardware and software security principles.
10. Describe safety procedures to protect people, equipment, and environments from accidents, damage, and contamination when dealing with computer technology.