ITE-PFT Platform Technologies

ITE-PFT-01 Perspectives and impact

a. Describe how the historical development of hardware and operating system computing platforms produced the computing operating systems we have today.

ITE-PFT-02 Operating systems

a. Describe how the components and functions of an operating system work together to provide a computing platform.
b. Demonstrate the ability to use both Windows and Unix-class systems. *(Windows ITM 301 / Linux ITMO 456)*
c. Describe how the similarities and differences between Windows and Unix-class systems provide different advantages for these computing platforms.
d. Demonstrate the main benefits of using scripts to perform operating systems tasks by automating a computing task. *(ITMO 456)*

ITE-PFT-03 Computing infrastructures

a. Analyze the power requirements for a computer system.
b. Justify the need for power and heat budgets within an IT environment.
c. Describe how the various types of servers meet different organizational requirements. *(New ITM 100)*
d. Justify the need for hardware and software integration.

ITE-PFT-04 Architecture and organization

a. Describe how numbers and characters are represented in a computer.
b. Produce a block diagram, including interconnections, of the main parts of a computer.
c. Describe how a computer stores and retrieves information to/from memory and hard drives.
d. Produce a definition for each of these terms: bus, handshaking, serial, parallel, data rate.

ITE-PFT-05 Application execution environment

a. Design a simple finite state machine with at least 6 states and 4 conditional branches, then build and troubleshoot it. *(Outside our scope.)*
b. Compare the performance of two different computers with two different operating systems.
c. Illustrate the advantages and disadvantages of the five main hardware implementation options.