ISACA Computing Fundamentals (ITCA)

This ITCA Computing Fundamentals training covers introductory concepts that entry-level IT professionals should be aware of: networking, virtualization, and security. Use this Computing Fundamentals (ITCA) exam prep to learn how to manage and troubleshoot hardware, software, networking, and cybersecurity issues, giving you a strong foundation ofentry-level IT skills. Once you take this ITCA course, and you'll be prepared to earn your ITCA certification.

CBT Nuggets course material →

STUDY PLAN

WEEK 1

Numbers in the Computing World

Understand Binary Values

Units of Measure

Hex Numbers

Base64 Numbering

ASCII

Validation

Data Input

Keyboards

Keyboard Sizes

Pointing Devices

Additional Input Devices

Validation

Memory and Storage

Four Types of Data Storage

Internal

Random Access Memory (RAM)

Secondary Memory

Tertiary Storage

Validation

Data Processing and Output

Data Processing Essentials

Data Processing

CPU Flow of Data

Clock Cycle

WEEK 2

Obtaining CPU Info

Data Output

Data Output

Validation

Electronic Components and Other Hardware

Electronic Components

The Integrated Circuit

Memory

Storage Connections

Motherboard Overview

A Tour of a High-End Motherboard

Power Supply

Validation

Software

BIOS and UEFI

The Operating System

Types of Operating Systems

Clustered Operating Systems

Validation

Operating Systems

Mobile Operating Systems

Linux History

A Comparison of Windows and Linux

A Quick Look at Linux

WEEK 3

A Quick Look at MacOS

Validation

Software, Data, and File Systems

Software Overview

Open and Closed Source Software

Additional Software Licenses

What is a File System?

FAT File Systems

Other File Systems

File Types

Data Types

Validation

The OSI Model and Network Topology

Introduction to the OSI Model

The Seven Layers of the OSI Model

Network Topologies

Network Topologies

Network Topology

Network Topology

Challenge

Machine and IP Addresses

Machine Addressing

Understanding IP Addresses

Review Binary to Decimal Conversion

Perform ANDing

WEEK 4

Implement the Default Gateway

Private IP Addresses

Subnet Classes

Validation

Virtualization

Why Virtualize Servers?

Why Virtualize Desktops?

Virtualization Products

Cloud Computing

Virtualization Demo and Validation

Security Concepts

Confidentiality

Integrity

Availability

The Threat Landscape

Validation

Common Attacks

Zero-Day and Bug Bounty

WEEK 5

Backdoor

Brute Force

Buffer Overflow

Denial of Service

Side-Channel, MitM, and Spoofing

Social Engineering

Bonus Attacks

Validation

Securing Resources and Assets

Emergency Power

Specialty Cable

Fire Suppression

Facility Safeguards

Identity and Access Management

Validation

Security Operations and Controls

Log Overview

Explore Event Logs

Antimalware Overview

Microsoft Defender Demo

Configure Microsoft Firewall

Using Whole Disk Encryption

Validation