



IT Support Essentials I

2023-2024 Catalog

[ARCHIVED CATALOG]

ITSP 132 - IT Support Essentials I

PREREQUISITES/COREQUISITE: [INFM 109 - Informatics Fundamentals](#) or [CSCI 101 - Computer Science I](#) or [SDEV 120 - Computing Logic](#).

PROGRAM: Information Technology Support

CREDIT HOURS MIN: 2

LECTURE HOURS MIN: 1

LAB HOURS MIN: 2

DATE OF LAST REVISION: Fall, 2020

Delivers the necessary competencies with hands-on experience in the lab for an entry-level Information Technology professional. Students will have the knowledge required to assemble components based on customer requirements, install, configure and maintain PCs and mobile devices for end users, understand the basics of networking, properly and safely diagnose, resolve and document common hardware and network issues while applying troubleshooting skills. Students will also learn the basics of virtualization, scripting, desktop imaging, and deployment.

MAJOR COURSE LEARNING OBJECTIVES: Upon successful completion of this course the student will be expected to:

1. Mobile Devices.
 - a. Apply appropriate installation and configuration of laptop hardware, accessories, ports, components and features.
 - b. Describe characteristics of various types of other mobile devices.
 - c. Confirm basic mobile device network connectivity, application support, and device synchronization.
2. Networking.
 - a. Identify wired and wireless networking protocols, ports, services provided by network hosts and network configuration concepts.
 - b. Explain common networking hardware devices to include; Routers, Switches, Wireless Access Points and Firewalls.
 - c. Build and configure a basic wired/wireless SOHO network.
 - d. Assess Internet connection types, network types, basic cable types, common connector types, and their features.
 - e. Examine the appropriate use of networking tools to include crimpers, cable strippers, multimeter, tone generator and probe, cable tester, loopback plug, punchdown tool and WiFi analyzer.
3. Hardware.
 - a. Select the appropriate installation and configuration of various RAM types, storage devices, motherboards, CPU's, and add-on cards.
 - b. Explain the purposes and uses of various peripheral types and power supplies.
 - c. Devise a plan to select and configure appropriate components for a custom PC configuration to meet customer specifications or needs.
 - d. Apply appropriate installation and configuration of SOHO multifunction devices/printers and maintenance of various print technologies.
 - e. Analyze common mobile device and printer issues; and common wired and wireless network problems
4. Virtualization and Cloud Computing.
 - a. Investigate cloud computing concepts and the deployment and configuration of client-side virtualization.
5. Troubleshooting.
 - a. Assess best practice methodologies to resolve problems related to network problems, motherboards, RAM, CPUs, power, hard drive, RAID arrays, video projector and display issues.



COURSE CONTENT: Topical areas of study include -

- System assembly
- Issue resolution
- Device installation
- Virtualization
- Networking basics
- TCP and UDP
- Troubleshooting best practices
- Mobile computing

CERTIFICATION ASSOCIATED COURSE:

This course has been identified as appropriate preparation for a nationally recognized, vendor certification that closely reflects the objectives of the course. In addition to a textbook, certification preparation materials have also been incorporated into the course for purchase at the bookstore to acclimate students to the manner and rigor of the actual certification exam. Preparation materials will consist of TestOut, LabSim, and/or some kind of practice test software such as ExamForce, Transcender or other equally appropriate software and will make up no less than 20% of the final grade.

CERTIFICATION/LICENSURE DISCLAIMER:

Ivy Tech cannot guarantee that any student will pass a certification or licensing exam. Your success will be determined by several factors beyond the instruction you are given in the classroom including your test-taking skills, your willingness to study outside of class, and your satisfactory completion of appropriate practice exams. Certification exam questions are drawn from databases of tens of thousands of possible questions and no two people are asked exactly the same progression of questions. Therefore, a thorough understanding of the subject matter is required. The goal of Ivy Tech in providing a certification exam studies class is to assist you in understanding the material sufficiently to provide a firm foundation for your studies as you prepare for the exam.

[Course Addendum - Syllabus \(Click to expand\)](#)
