Mobile/Wireless Computing Support 2023-2024 Catal

[ARCHIVED CATALOG]

ITSP 215 - Mobile/Wireless Computing Support

PREREQUISITES: ITSP 135 - Hardware / Software Support or (ITSP 132 - IT Support Essentials I and ITSP 134 - IT Support Essentials II).
PROGRAM: Information Technology Support
CREDIT HOURS MIN: 3
LECTURE HOURS MIN: 2
LAB HOURS MIN: 2
DATE OF LAST REVISION: Fall, 2020

Develops the student's understanding of radio frequency fundamentals and behavior; the features and functions of wireless local area network components. Included are the skills needed to install, configure, and troubleshoot wireless local area network hardware peripherals. Protocols such as the Institute of Electrical and Electronics Engineers 802.11 radio frequency technologies are investigated including regulations, standards, protocols and devices. Network implementation, network security, and radio frequency site survey/analysis are vital elements of this course.

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

1. Differentiate between the different cellular and radio frequency technologies and the functionality of each.
2. Configure Wi-Fi devices using appropriate options based on given scenarios.
3. Conduct site surveys assessing air communication feasibility.
4. Discuss the different physical and logical network infrastructures including wireless-to-wireless and wireless-to-wired networks.
5. Explain the functionality of each layer of the Open Systems Interconnection (OSI) model.
6. Identify common network ports and wireless protocols.
7. Deploy wireless network solutions, including device installation, configuration, and management, based on given scenarios.
8. Conduct systematic troubleshooting methods for wireless devices including connectivity, application, and security issues.
9. Compare and contrast different security principles such as encryption schemes, risk assessments, threat detection, and disaster recovery.
10. Create and/or update device capability certifications, on-boarding/off-boarding procedures, access controls, incident reports, and mitigation procedures based on current best practices.
11. Implement mobile device backup and data recovery strategies.
12. Identify best practices in configuring and deploying current and emerging mobile applications and devices.
13. Explain the characteristics of Power over Ethernet.
14. Discuss the IEEE 802.11 standard and amendments.

COURSE CONTENT: Topical areas of study include -

- Wireless devices
- Wireless networking
- OSI model

- Current Wi-fi best practices
- Cellular Technologies
- Radio Frequency communications
- Device management
- Troubleshooting and security
- 802.11x standards
- Infrastructure/site surveys
- Network ports and protocols
- Backup and data recovery strategies
- Security
- Device control (deployment and management)
- PoE
- IEEE 802.11-2007 standard
- Mobility+

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)