COURSE DESCRIPTION

Prerequisites: ITCC 2410 or ITCC 1446 or CCNA certification.

How to monitor and maintain complex, enterprise and switched IP networks. Skills learned include the planning and execution of regular network maintenance, as well as support and troubleshooting using technology-based processes and best practices based on systematic and industry recognized approaches.

ITCC 2456 is a 4 credit hour course. (3 lec., 4 lab.)

WCEM-END-OF-COURSE OUTCOMES

Plan and document the most common maintenance functions in complex enterprise networks; develop a troubleshooting process to identify and solve problems; select tools that best support specific troubleshooting and maintenance processes; practice maintenance procedures and fault resolution in switched and routed environments; identify and troubleshoot network services, performance issues, wireless connectivity, VoIP, and video; practice maintenance procedures and fault resolution in a secure infrastructure and in a complex environment.

STUDENT LEARNING OUTCOMES

As a result of participating in ITCC 2456 Troubleshooting and Maintaining Cisco IP Networks (TSHOOT), the student will be able to:

- Plan and document the most common maintenance functions in complex enterprise networks;
- Develop a troubleshooting process to identify and solve problems;
- Select tools that best support specific troubleshooting and maintenance processes; practice maintenance procedures and fault resolution in switched and routed environments;
- Identify and troubleshoot network services, performance issues, wireless connectivity, VoIP, and video;
- Practice maintenance procedures and fault resolution in a secure infrastructure and in a complex environment.

COURSE MATERIALS


Suggested: 4 GB flash drive

Provided: Student Login for on-line course materials (Exams and Quizzes)

Routers and Switches
A student of this institution (El Centro College) is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

**Major Course Requirement**
Students will participate in Discussion Board addressing topics in each chapter.
Students will complete the review questions in each chapter.
Students will complete hands-on projects in each chapter.
Students will produce a Case Study Project paper.

**Subject Matter**
Topics covered in the lecture portion of the course include:
- Planning Maintenance for Complex Networks
- Troubleshooting Processes for Complex Enterprise Networks
- Using Maintenance and Troubleshooting Tools and Applications
- Maintaining and Troubleshooting Campus Switched Solutions
- Maintaining and Troubleshooting Routing Solutions
- Troubleshooting Addressing Services
- Troubleshooting Network Performance Issues
- Troubleshooting Converged Networks
- Maintaining and Troubleshooting Network Security Implementation
- Review and Preparation for Troubleshooting Complex Enterprise Networks

**Disclaimer**
The provisions contained in this syllabus do not constitute a contract between the student and El Centro College. These provisions may be changed at the discretion of the Coordinator/Instructor. When necessary, appropriate notice of such changes will be given to the student.

The instructor-of-record may provide additional information to enhance the course to meet the needs of the enrolled students, provided that the enhancements do not conflict with the official course syllabus.

**Policies**
Students should click on the links below and read all of these policies.

[General institutional policies](#)
[Course-related institutional policies](#)