# NETWORK AND ROUTING FUNDAMENTALS
## Course Syllabus

<table>
<thead>
<tr>
<th>Course Number:</th>
<th>INFO-0052</th>
<th>OHLAP Credit:</th>
<th>Yes</th>
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<tbody>
<tr>
<td>OCAS Code:</td>
<td>8125</td>
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<tr>
<td>Course Length:</td>
<td>150 Hours</td>
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<tr>
<td>Career Cluster:</td>
<td>Information Technology</td>
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<td>Career Pathway:</td>
<td>Information Support And Services</td>
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<td>Career Major(s):</td>
<td>Network PC Support Specialist</td>
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### Pre-requisite(s):  
Business and Computer Tech OR Fundamentals of Technology

### Course Description:  
Students will prepare for positions related to the installation, configuration, and troubleshooting of network hardware peripherals and protocols. Students will learn the basics of networking by exploring the OSI model, network topologies, cabling techniques, network communications protocols, and hardware.

### Textbooks:  
Network + Certification, Randy Rattliff and Danial Smith, Marcraft, 2006

### Course Objectives:  
**Demonstrate Knowledge of Networking and Routing Fundamentals**
- 1. Perform tasks related to networking mathematics, terminology, and models.
- 2. Explain networking fundamentals.
- 3. Identify the differences in networking media types.
- 4. Perform cable testing.
- 5. Configure/cable LANs and WANs.
- 6. Apply Ethernet fundamentals and technologies.
- 7. Demonstrate the concepts of Ethernet switching.
- 9. Identify networking functions performed within the Open System Interconnection (OSI) model.
- 10. Explain/apply routing fundamentals and subnets.
- 11. Demonstrate the appropriate use of TCP/IP Transport and Application Layer.
- 12. Use appropriate routing protocols.
- 14. Utilize access control lists (ACLs).
- 15. Demonstrate proper care, maintenance, and use of networking software, tools, and equipment.

**ODCTE Objectives**

### Teaching Methods:  
The class will primarily be taught by the lecture and demonstration method and supported by various media materials to address various learning styles. There will be question and answer sessions over material covered in lecture and media presentations. Supervised lab time is provided for students to complete required projects.
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Grading Procedures:
1. Students are graded on theory and shop practice and performance.
2. Each course must be passed with eighty (80%) percent or better.
3. Grading scale: A=90-100%, B=80-89%, C=70-79%, D=60-69%, F=50-59%.

Description of Classroom, Laboratories, and Equipment:
Tulsa Technology Center campuses are owned and operated by Tulsa Technology Center School District No. 18. All programs provide students the opportunity to work with professionally certified instructors in modern, well-equipped facilities.

Available Certifications/College Credit:
The student may be eligible to take state, national or industry exam after completion of the program. College credit may be issued from Oklahoma State University-Okmulgee or Tulsa Community College. See program counselor for additional information.

College Credit Eligibility:
The student must maintain a grade point average of 2.0 or better.