COURSE DESCRIPTION:
 Presents LAN and WAN technologies in detail. Network operations, design concepts, and protocols will be covered. Students will learn how to make infrastructure components and set up workstations for LAN operability and WAN interoperability. LAN and WAN networks will be designed and implemented using hubs, switches, and routers. Basic Cisco switch and router programming will be covered. Troubleshooting strategies will be covered in detail.

COURSE OBJECTIVES:
 Upon completion of this course, the student will be able to:
1. List and describe the basic elements of computer networking.
2. List and describe common network strategies and topologies.
3. Describe and evaluate implementation of five common network services within various organizational scenarios.
4. Identify and describe common hardware components of a network, as well as cable and wireless transmission media.
5. Evaluate implementation of common cable and wireless transmission media and include their associated cost, ease of installation, capacity, attenuation, and immunity from interference characteristics.
6. Identify and describe common network and internetwork connectivity devices, as well as how network software is used to communicate over a network.
7. Evaluate implementation of common network and internetwork connectivity devices according to a given organizational scenario.
8. Categorize and identify the OSI Reference Model and describe how communication layers interact.
9. Define standards and protocols and how they are used in the computer networking industry.
10. Use conceptual knowledge of five protocol stacks and a variety of miscellaneous protocols to identify the individual protocols that relate to a given organizational scenario.
11. Relate future concepts and possibilities for computer networks based on readings in assigned industry publications.
12. Identify and describe the basic functions of network managements.
13. Complete applications which include hands-on experience with installation and interconnectivity among different NOS and protocol analyzers.

STUDENT RESOURCES:
 Text: “Practical Networking Activities”; Warren; All American Publishing; ISBN# 0-9726518-3-7

ASSIGNMENTS AND TESTS:
 Reading assignments are required each week. There will be a total of one (1) homework assignment, five (5) quizzes, and one (1) final exam. All testing will consist of a combination of multiple choice, fill-in,
true/false, and short-answer. LATE homework will NOT be accepted. MISSED quizzes CANNOT be made up.

**POLICIES AND PROCEDURES:**
Final grades will be determined on an exact percentage scale; there will be no deviation from this scale.

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<thead>
<tr>
<th>Percentage Range</th>
<th>Grade</th>
<th>Weight</th>
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<tbody>
<tr>
<td>90-100%</td>
<td>A</td>
<td>20%</td>
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<td>80-89%</td>
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<td>Below 60%</td>
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Final grade percentage is determined through a weighted average of quizzes, homework, and tests. Students having the course CREDIT/NO CREDIT must receive 70% or above for CREDIT. It is the STUDENTS RESPONSIBILITY to officially withdraw (DROP) from the class. Students who no longer attend class but do not withdraw will receive a failing grade (F) at semester’s end.