# COURSE SYLLABUS

## Course Title:
Network Essentials I

## Department:
Business and Technology

## Curriculum:
Computer Information Systems

## Course Code:
CST*130

## Prerequisites:
- C- or better in Integrated Reading and Writing II (ENG*075)
- OR Introduction to College Reading & Writing (ENG*093)
- OR Introduction to College English (ENG*096)
- OR Reading & Writing VI (ESL*162), or placement into Composition (ENG*101) [including embedded ENG*101]

## Credit Hours:
3

## Contact Hours:
- Lecture: 3
- Clinical: 0
- Lab: 0
- Studio: 0
- Other: 0
- TOTAL: 3

## Class Maximum:
24

## Semesters Offered:
F/S

## Catalog Course Description:
Introduces students to the underlying concepts of data communications, telecommunications, and networking. Provides a general overview of computer networks and focuses on terminology and current networking environment technologies. Topics to be covered include network topologies, protocols, architectures, and components.

## Topical Outline:
1. Introduction to Computer Networks and Computer Fundamentals
2. Physical Layer Cabling: Twisted Pair
3. Interconnecting the LANs
4. TCP/IP
5. Introduction to Router Configuration
6. Routing Protocols
7. Wide Area Networking

## Outcomes:
Upon successful completion of this course, the student will be able to do the following:

### COURSE:
1. describe the OSI model and associate how various protocols comply with the model
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<th>Outcomes</th>
<th>Details</th>
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<tbody>
<tr>
<td>2.</td>
<td>identify and describe LAN topologies, protocols, standards and architectures</td>
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<td>3.</td>
<td>identify and describe the appropriate use of LAN hardware components such as routers, switches and gateways</td>
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<td>4.</td>
<td>design a LAN topology and architecture based on a given set of criteria</td>
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**PROGRAM:** *(Numbering reflects Program Outcomes as they appear in the college catalog)*

**Computer Information Systems Associate Degree**

**NETWORKING**

2. Knowledge of industry standard networking and communication technology

3. Analyze and evaluate a networking scenario and recommend appropriate solutions

**GENERAL EDUCATION:** *(Numbering reflects General Education Outcomes as they appear in the college catalog)*

2. **Critical Analysis/ Logical Thinking** - Students will be able to organize, interpret, and evaluate evidence and ideas within and across disciplines; draw reasoned inferences and defensible conclusions; and solve problems and make decisions based on analytical processes.

   **Demonstrates:** Identifies the issue(s); formulates an argument; explains and analyzes relationships clearly; draws reasonable inferences and conclusions that are logical and defensible; provides support by evaluating credible sources of evidence necessary to justify conclusions.

   **Does Not Demonstrate:** Identifies few or no issues; formulates an argument without significant focus; provides an unclear explanation of analysis and relationships; drawing few reasonable inferences and conclusions that are illogical and indefensible; provides little to no support using credible sources of evidence necessary to justify conclusions.

3. **Ethical Dimensions (embedded)** - Students will identify ethical principles that guide individual and collective actions and apply those principles to the analysis of contemporary social and political problems.

   **Demonstrates:** Identifies and reflects critically on ethical issues presented in classroom instruction or in assigned co-curricular or civic activities and/or professional internships and practica.

   **Does Not Demonstrate:** Does not sufficiently identify or reflect critically on ethical issues presented in classroom instruction or in assigned co-curricular or civic activities and/or professional internships and practica.

### Evaluation:

**List how the above outcomes will be assessed.**

1. Assignments and case studies

2. Simulation labs

3. A comprehensive project for inclusion in the student’s ePortfolio

### Instructional Resources:

**List library (e.g. books, journals, on-line resources), technological (e.g. Smartboard, software), and other resources (e.g. equipment, supplies, facilities) required and desired to teach this course.**

**Required:** Networking Lab (Room 314)

**Desired:** None

### Textbook(s)

**Refer to current academic year printout.**

*Original-4/10/07*