

**Course Syllabus**  
**Southeast Missouri State University**

**Department of Industrial Technology**

**Course Number:** ET-100

**Title of Course:** Networking Fundamentals and  
Router Technologies

**Revision:** Fall 99

**Instructor:** Dr. Raj Desai  
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**I. Catalog Description and Credit Hours of Course:**

This course will focus on the OSI networking model, network topologies, IP addressing, subnet masks, basic network design, beginning router configurations, routing protocols, and introduction to LAN switching.

3 credit hours

(4 hours in class/lab and 6 hours outside class/on the internet per week)

**II. Prerequisites:** Basic Computer Literacy: Windows, DOS etc.

**III. Purposes of the Course:**

Upon completion of this course, the students should be able to:

- A. Describe the 7 layers of the OSI reference model.
- B. Identify the reasons why industry uses a layered model.
- C. Define and describe the function of IP and MAC addresses
- D. Configure router elements.
- E. Configure IP addresses.

**IV. Expectations of Students:**

- A. Students will be expected to attend class regularly and be responsible for all information presented in class.
- B. Students will be expected to participate and contribute to the class as appropriate.
- C. Students will be expected to perform satisfactorily on all

written/lab assignments. (No credit for late work and no handwritten assignments).

- D. Students will be expected to take all examinations on assigned dates.

<b>V. Course Content:</b>	<b>Weeks</b>
A. Networking Fundamentals Lessons 1-15	1-3
B. Hardware required to operate a LAN Lessons 16-30	4-6
C. Data transmission on a Network Lessons 31-45	7-9
D. Managing the network Lessons 45 -65	10-12
E. Router configurations and LAN switching Semester 2 Lessons 1-14	13-16

**VI. Textbook:** All the lessons are on the Web.

**Reference Material:** Chellis, Perkins and Strebe.

MCSE: Networking Essentials Study Guide, Sybex. ISBN: 0-7821-1971-9

**VII. Basis For Student Evaluation:**

Students will be evaluated based on the following basis.

A. Written Exams (Midterm 25%, Final: 25%)	50%
B. Lab Assignments	30%
C. Presentations	20%

Letter grades will be based on the following criteria:

90 -100	= A
80 - 89	= B
70 - 79	= C
60 - 69	= D
Below 60%	= F

(Items in syllabus subject to change at discretion of Instructor)

**VIII. Lab Fees:** There is a \$10.00 lab fee for this course to cover the cost of lab consumables such as wires, connectors etc.

**IX. Disabilities Statement:** If you have special needs addressed by the Americans with Disabilities Act and need course materials in an alternative format, notify your course instructor immediately. Reasonable efforts will be made to accommodate your special needs.