MURRAY STATE UNIVERSITY

DEPARTMENT OF INDUSTRIAL AND ENGINEERING TECHNOLOGY

Course Number: TSM 353 Credit Hours: 3

I. TITLE: Network Security

II. CATALOG DESCRIPTION:

A primarily lab-based course, studying techniques for securing networks and network operating systems.

III. PURPOSE:

Help the student develop techniques for securing local area network environments.

IV. COURSE OBJECTIVES:

To provide the Telecommunications student with the skills necessary to effectively protect network architectures and operating systems from modern intrusion techniques.

V. CONTENT OUTLINE:

A. Perimeter Security Fundamentals
B. Firewalls
    1. Packet Filtering Firewalls
    2. Stateful Firewalls
    3. Proxy Firewalls
    4. Transparent/Bridging Firewalls
C. Role of Routers in Perimeter Security
D. Network Intrusion Detection/Prevention
E. Wireless Network Security
F. Other Network Security Topics
    1. Perimeter Design Fundamentals
    2. Maintaining a Security Perimeter
    3. Introduction to Security Policy

VI. INSTRUCTIONAL ACTIVITIES:

Lab with some Lecture and Discussion; also special lecture by industry professional(s).

VII. FIELD, CLINICAL, AND/OR LABORATORY EXPERIENCES: NONE

VIII. RESOURCES:

http://campus.murraystate.edu/tsm
http://campus.murraystate.edu/blackboard/

IX. GRADING PROCEDURES:

Quizzes	40 %
Labs*	50 %
Special Project	10%
Total	100 %

*Lab grading rubric involves 80% correct answer and analysis, 20% effort

Grading Scale:

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

X. ATTENDANCE POLICY:

This course will adhere to the policy published in the MSU Undergraduate Bulletin.

Lab attendance will be recorded each lab session. No provisions will be made for making up unexcused absences from labs. A student is allowed ONE UNEXCUSED ABSENCE for each MIDTERM. That is, one allowed absence before midterm, and one after. A missed lab will still result in a reduction of the grade for that lab report. Two or more absences within a single midterm will automatically fail the student. The only exception to missed labs is excused absences, which are deemed excused as detailed in the policy published in the MSU Undergraduate Bulletin.

XI. ACADEMIC HONESTY POLICY:

This course will adhere to the policy published in the MSU Undergraduate Bulletin.

Under no circumstance may student answers in laboratory reports be borrowed, copied, or obtained in any other way from another lab group. Unauthorized or uncited sources will be treated as plagiarism and disciplinary action will be carried out as detailed in the MSU Undergraduate Bulletin.

XII. TEXT AND REFERENCES:

Linux Firewalls, 3rd Edition, Suehring and Ziegler. ISBN 0-672-32771-6
Inside Network Perimeter Security, 2nd Edition, Northcutt, et. al.
ISBN: 0-672-32737-6

XIII. PREREQUISITES:

TSM 232, TSM 340/351, TSM 343

XIV. STATEMENT OF AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY:

Murray State University endorses the intent of all federal and state laws created to prohibit discrimination. Murray State University does not discriminate on the basis of race, color, national origin, gender, sexual orientation, religion, age, veteran status, or disability in employment, admissions, or other provision of services and provides, upon request, reasonable accommodation including auxiliary aids and services necessary to afford individuals with disabilities equal access to participate in all programs and activities.