

# MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE

## COURSE OUTLINE

DEPT. CST

COURSE NUMBER: 2600

NUMBER OF CREDITS: 3

Lecture: 2 Lab: 1 OJT: 0

### Course Title:

Fundamentals of Wireless Networking

### Catalog Description:

Fundamentals of Wireless Networking course provides a broad survey of wireless communications including in-depth coverage of protocols, transmission methods, and IEEE wireless standards. Many hands-on exercises are included, which allow students to practice skills as they are learned.

### Prerequisites or Necessary Entry Skills/Knowledge:

None

### FULFILLS MN TRANSFER CURRICULUM AREA(S) (*Leave blank if not applicable*)

- Goal 1: Communication: By meeting the following competencies:
- Goal 2: Critical Thinking: By meeting the following competencies:
- Goal 3: Natural Sciences: By meeting the following competencies:
- Goal 4: Mathematics/Logical Reasoning: By meeting the following competencies:
- Goal 5: History and the Social and Behavioral Sciences: By meeting the following competencies:
- Goal 6: The Humanities and Fine Arts: By meeting the following competencies:
- Goal 7: Human Diversity: By meeting the following competencies:
- Goal 8: Global Perspective: By meeting the following competencies:
- Goal 9: Ethical and Civic Responsibility: By meeting the following competencies:
- Goal 10: People and the Environment: By meeting the following competencies:

### Topics to be Covered

Wireless Communications

Wireless Data Transmission

Antennas

Introduction to Wi-Fi WLANS

WLANs and WLAN Security

Radio Frequency Identification and Near-Field Communication

## Student Learning Outcomes

Describe a wireless LAN.

Describe the history of wireless networking.

Identify the hardware components of a wireless network.

Design a wireless network topology.

Describe wireless transmission methods.

Configure wireless hardware components.

Configure the client and adaptors for a wireless network.

Identify antenna types and functions.

Describe wireless security.

Perform a site survey for a wireless network.

Install a wireless network.

Describe the duties of a wireless network administrator.

Is this course part of a transfer pathway: Yes  No

\*If yes, please list the competencies below

Revised Date: 3/29/2022