

COURSE SYLLABUS

DIVISION: Workforce Services

CURRICULUM IN WHICH COURSE IS TAUGHT: Integrated Systems Technology & Electrical/Electronic Engineering Technology

COURSE NUMBER AND TITLE: ETR 180, Topics in Industrial Networking

CREDIT HOURS: 2

HOURS/WEEK LECTURE: 2

HOURS/WEEK LAB: 1

LECTURE/LAB COMBINATION: 3

This course teaches the student various industrial communication techniques. A combination of lecture and lab is used to reinforce the learning experience.

- I. CATALOG DESCRIPTION:** Examines the theory and implementation of digital communications systems. Features OSI model and plant floor networks, which includes TCP/IP, fiber optics, wireless (WIFI and Bluetooth), Serial Communications (RS-232, RS-422, and RS485) and Universal Serial Bus (USB). In addition, PLC communication protocols (Device Net and Profibus) will be examined.
- II. RELATIONSHIP OF THE COURSE TO CURRICULUM OBJECTIVES IN WHICH IT IS TAUGHT:**
Prepares the student to develop strategic skills to connect, control, program and troubleshoot various industrial equipment and processes.
- III. REQUIRED BACKGROUND:** The student must have completed the first two semesters of the program or have the instructor's permission.
- IV. COURSE CONTENT**
 - Physical Layer
 - Data-Link Layer (Connecting)
 - Networking and Transport Layers (TCP/IP)
 - Connections and the PC
 - Various Connectivity Methodologies

V. Learner Outcomes**VI. Evaluation**

Demonstrate the recognition of various forms of industrial communication protocols.	Class participation, homework, quizzes, class projects, and final exam
Demonstrate an understanding of basic network infrastructure.	Class participation, homework, quizzes, class projects, and final exam
Demonstrate an understanding of TCP/IP and how it is used in industrial network communications.	Class participation, homework, quizzes, class projects, and final exam
Demonstrate the ability to configure device communications on an industrial network.	Class participation, homework, quizzes, class projects, and final exam
Demonstrate the ability to troubleshoot issues surrounding industrial network communications.	Class participation, homework, quizzes, class projects, and final exam

VII. The course supports the following general education goals/objectives:DCC Educational Objectives

- Communication
- Critical Thinking
- Information Literacy
- Quantitative Reasoning

DCC Title IX (Sexual Harassment and Misconduct): Your Rights and How to Make a Report
Consistent with its mission, Danville Community College is committed to providing a learning and working environment that emphasizes the dignity and worth of every member of its community. Sexual misconduct, which encompasses a range of behavior used to obtain sexual gratification against another's will or at the expense of another in any form will not be tolerated. Sexual misconduct includes sexual harassment, sexual assault, sexual exploitation, and sexual violence. Sexual harassment is unwelcome conduct of a sexual nature, which can include unwelcome sexual advances, requests for sexual favors, or other verbal, nonverbal, or physical conduct of a sexual nature. Thus, sexual harassment prohibited by Title IX can include conduct such as touching of a sexual nature; making sexual comments, jokes, or gestures; writing graffiti or displaying or distributing sexually explicit drawings, pictures, or written materials; calling students sexually charged names; spreading sexual rumors; rating students on sexual activity or performance; gender-based stalking or bullying; conditioning a benefit on submitting to sexual advances; or circulating, showing, or creating e-mails or websites of a sexual nature. Under Title IX, this constitutes sexual misconduct and includes rape or sexual assault.

If you have been the victim of sexual harassment or other sexual misconduct, you have certain rights under Title IX. For additional information regarding your rights, please consult the DCC Title IX website at http://www.dcc.vccs.edu/News/Title_IX/Title_IX_and_Sexual_Misconduct.htm.

In accordance with College policy and federal law, all faculty and staff members are required to report incidents of sexual harassment including sexual violence to one of the individuals below whose responsibility it is to investigate all complaints. In addition, you can contact these individuals for a complaint against a Danville Community College faculty or staff member for sexual harassment, sexual assault, sex discrimination, or other forms of sexual misconduct:

Title IX Coordinator: Ms. Cheryl Terry
Wyatt Building, Room 111
434.797.8524
titleix@dcc.vccs.edu or
cterry@dcc.vccs.edu

Deputy Title IX Coordinator Mr. Howard Graves
Wyatt Building, Room 108
434.797.8443
titleix@dcc.vccs.edu or
hgraves@dcc.vccs.edu

Plagiarism and Academic Dishonesty:

Students will be expected to maintain complete honesty and integrity in their academic work in this class. Acts of academic dishonesty, such as cheating, plagiarism, or inappropriately using the work of others to satisfy course requirements, will be not tolerated. Students who maintain their enrollment in this class agree that such acts will be managed at the discretion of the instructor according to the severity or the infraction. (Faculty may here specify the sorts of actions you will take in the event of a violation of academic dishonesty)