

METROPOLITAN STATE COLLEGE of DENVER  
Office of Academic Affairs

**REGULAR COURSE SYLLABUS**

School of: Professional Studies

Department: Engineering Technology

CIP Code: 15.0303

Prefix & Course Number: EET 4330 Crosslisted With\*: \_\_\_\_\_

Course Title: Data Communications

Check All That Apply: Required for Major: \_\_\_\_\_ Required for Minor: \_\_\_\_\_ Specified Elective: X  
Required for Concentration: X Elective: X Service Course: \_\_\_\_\_  
Required for Certificate: X

Credit Hours: 3 (2+2)

Total Contact Hours per semester (assuming 15-16 week semester):

Lecture 30 Lab 30 Internship \_\_\_\_\_ Practicum \_\_\_\_\_ Other (please specify type and hours): \_\_\_\_\_

Schedule Type(s): B Grading Mode(s): L

Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned\*\*):  
\_\_\_\_\_

\*\* NOTE: This information must be included in the course description.

Restrictions (Variable Topics Course): \_\_\_\_\_

Prerequisite(s): EET 2310, with a grade of "C" or better.

Corequisite(s): \_\_\_\_\_

Prerequisite(s) or Corequisite(s): \_\_\_\_\_

Banner Enforced:

Prerequisite(s): EET 2310, with a grade of "C" or better.

Corequisite(s): \_\_\_\_\_

Prerequisite(s) or Corequisite(s): \_\_\_\_\_

**Catalog Course Description:**

This course covers methods of local and distant digital communications including: systems, standards, and hardware used for transmitting digital data either synchronously or asynchronously.

APPROVED: \_\_\_\_\_ 12 Feb 08  
 Department Chair OR Program Director \_\_\_\_\_ Date 2/13/08  
 \_\_\_\_\_ 3/7/08  
 Dean OR Associate Dean \_\_\_\_\_ Date 3/7/08  
 Associate VP, Academic Affairs \_\_\_\_\_ Date \_\_\_\_\_

\*If crosslisted, attach completed Course Crosslisting Agreement Form

EET 4330:

**Required Reading and Other Materials will be equivalent to:**

Halsall (March 23, 2005). *Computer Networking and the Internet, 5<sup>th</sup> Edition*. Addison Wesley

**Specific, Measurable Student Behavioral Learning Objectives:**

Upon completion of this course the student should be able to:

1. Understand the OSI standards, data format structure, routing process and IP system design.
2. Understand voice, data and video equipment and its function in data networks
3. Design a voice, data and video network for a small business.

**Detailed Outline of Course Content (Major Topics and Subtopics) or Outline of Field Experience/Internship (experience, responsibilities and supervision):**

- |   |  |
|---|--|
| <p>I. Introduction:</p> <ul style="list-style-type: none"> <li>A. Digital Codes</li> <li>B. Communication Systems</li> <li>C. Electrical Specifications</li> </ul> <p>II. Asynchronous Transmission:</p> <ul style="list-style-type: none"> <li>A. Methods</li> <li>B. Standards</li> <li>C. Modems</li> <li>D. Interfacing Techniques</li> </ul> <p>III. Synchronous Transmission:</p> <ul style="list-style-type: none"> <li>A. Methods</li> <li>B. Standards</li> <li>C. Modems</li> <li>D. Interfacing Techniques</li> </ul> <p>IV. Local, Metropolitan, and Wide Area Networks:</p> <ul style="list-style-type: none"> <li>A. Methods</li> <li>B. Standards</li> </ul> | <p>V. Digital Transmission:</p> <ul style="list-style-type: none"> <li>A. Terrestrial Systems</li> <li>B. Satellite Systems</li> <li>C. Telephone Network and ISDN</li> <li>D. Multiplexing</li> <li>E. Modulation</li> </ul> <p>VI. Error Detection and Correction</p> <p>VII. Data Compression and Encryption</p> <p>VIII. Communication Systems Design:</p> <ul style="list-style-type: none"> <li>A. Capacity Analysis</li> <li>B. Future Growth Planning</li> </ul> |
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**Evaluation of Student Performance:**

1. Written exams
2. Homework
3. Lab reports
4. Presentations