Professor: Paul Richardson  
Office: 210 ELB, (313) 593 5560  
Email: richarpc@engin.umd.umich.edu  
Website: http://www.engin.umd.umich.edu/~richarpc

Class Hours:       Monday(1:40 pm - 3:30 pm)  
                   Wednesday (1:40 pm – 3:30 pm)

Office Hours       Mon & Wed 12:40 pm – 1:40 pm


Coordinator        Prof. P. Richardson, Dept. of Elec. & Comp. Eng.

Prerequisites by Topic:
   1) Knowledge of a high level programming language (preferably C).
   2) Logic design.

Topics:
   1) Introduction to ISO/OSI standard models          (3 hours)
   2) Data transmission media and signal format        (6 hours)
   3) Modulation and demodulation                      (6 hours)
   4) Computer Communication Protocols                (6 hours)
   5) Error control and error analysis                 (6 hours)
   6) Data compression techniques                     (4 hours)
   7) Local area network, topology, hardware and MAC  (8 hours)
   8) Exams                                           (3 hours)
   9) Project Supervision                              (14 hours)

Computer Usage:    Micro computers are used for design projects

Laboratory Projects: Computer network design projects are assigned

Term Reading:      Course Notes and Chapters 1-6, 9, 11 of the Halsall text
### ECE 471: Computer Networks and Data Communications
#### Winter 2003

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<th>Category</th>
<th>Comments</th>
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<th>Points</th>
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<tr>
<td>Design Assignments</td>
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<td>TBA</td>
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<tr>
<td>Quizzes</td>
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### 1999-2000 Catalog Data:

**ECE 471: Computer Networks and Data Communications, 3 credits.**

**Prerequisites:** ECE 372

Hardware and software techniques used in interfacing between computers and other computers or devices. Data transmission techniques and protocols. Introduction to popular local area network protocols. Forward Error Control Techniques and Data Compression. Introduction to wireless communications with focus on major challenges and obstacles and the cellular phone infrastructure. Term projects involve developing a data link layer protocol for interfacing and communication with microprocessors.

**Estimated ABET Category Credit**
- Engineering Science: 1 Credit or 33%
- Engineering Design: 2 Credits or 67%

Prepared By: Paul Richardson, Oct 2001
Modified By: