Course: ECE 54700 - Introduction to Computer Communication Networks

Type of Course: Technical Elective for the CmpE and EE programs

Catalog Description: A qualitative and quantitative study of the issues in design, analysis, and operation of computer communication and telecommunication networks as they evolve toward the integrated networks of the future, employing both packet and circuit switching technology. The course covers packet and circuit switching, the OSI standards architecture and protocols, elementary queuing theory for performance evaluation, random access techniques, local area networks, reliability and error recovery, and integrated networks.

Credits: 3, Dual Level, Undergraduate-Graduate

Contact Hours: 3

Prerequisite Courses: ECE 30200 or equivalent.


Course Objectives: To introduce students to the design, analysis and performance evaluation of computer communication and telecommunication networks through an understanding of their architectures and protocols.

Lecture Topics:

1. Introduction to computer networks and the Internet
2. Application layer
3. Transport layer
4. Network layer
5. Link layer and local area networks
6. Security in computer networks
7. Wireless networks

Computer Usage: Medium
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<thead>
<tr>
<th><strong>Laboratory Experience</strong></th>
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<tr>
<td><strong>Design Experience</strong></td>
<td>High</td>
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<tr>
<td><strong>Coordinator</strong></td>
<td>Carlos Pomalaza-Ráez, Ph.D.</td>
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