ISDS 409 – Business Telecommunications for Information System Design

Organizations are increasingly dependent on telecommunications and networks to support and run their operations. According to a Bureau of Labor Statistics projection, employment of computer and information technology occupations will grow “faster than the average for all occupations...in part due to a greater emphasis on cloud computing, the collection and storage of big data, more everyday items becoming connected to the Internet in what is commonly referred to as the ‘Internet of things,’ and the continued demand for mobile computing.” (www.bls.gov/ooh/computer-and-information-technology/home.htm) Addressing technology and business issues in telecommunications, this course should help you on your way in this growing area.

Course Description

This course covers topics in data communications and networking from the perspective of a business enterprise. The Open Systems Interconnection (OSI) model is the major framework of this course. Building on that framework, we investigate topics including communications concepts, network protocols, configurations and architectures, Local Area Networks (LANs), Wide Area Network (WAN) services, design, and security and control.

Upon completion of the course, students should be able to:

1. Know the OSI framework and for a given system, trace the flow of data through Layers 1-4 of the OSI model.
2. Understand the major telecommunication protocols and their applicability in different networks and enterprises.
3. Articulate the pros and cons of analog and digital communication systems, multiplexing, and compression.
5. Describe the methods of improving network performance for LANs and WANs.
7. Grasp the main issues in network security faced by organizations today.

Dr. Samuel Yang (Instructor) has published books and in various academic journals. You can contact Dr. Yang at syang@fullerton.edu for more information about the course.