

# IST 233 - Intro to Computer Networking

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## Course Description

Overview of technology, standards, implementation and management of digital computer networks. Wired and wireless local and wide area networks, Internet protocols, telecommunications, and network security. Includes weekly labs.

## Credit(s)

3.0

## Professor of Record

"Pavel" Md Tariqual Islam

## Audience

IST 233 is a core required information technology course for the iSchool's Bachelor of Science in Information Management and Technology. It is also one of the technology course options for the minor in Information Management and Technology. Students in other academic programs also take IST 233 to better understand how the Internet works.

## Learning Objectives

After completing this course, students will be able to:

1. Explain the **basic design and operation of the Internet**, including the key **design principles of interoperability, scalability, and high-availability** and the software and hardware components used to provide Internet access and cloud services.
2. Describe how **open industry standards** and protocols serve as a foundation for innovation and competition in the global Internet ecosystem.
3. Describe the major **security vulnerabilities** associated with computer networks and the policies, protection strategies and tools that can be used to avoid or mitigate these threats.
4. Explain key management issues related to networks, systems, and security, and describe the five dimensions of the FCAPS network management model.
5. Explain and demonstrate how content/information is **encoded** and transmitted as a sequence of network **packets** transported across **physical network media**, including copper cables, fiber-optics, and radio channels.
6. Describe and configure software and hardware required to support and troubleshoot network services using **Ethernet and Wi-Fi** local area network technologies.
7. Explain how the telephone system has been transformed from landline phones using simple voice analog signaling to mobile systems using digital signaling to support multimedia.
8. Describe the role Internet Service Providers (ISP's) and telecommunication carriers play in delivering wide area network services to homes and enterprises.
9. Explain the fundamental characteristics of **packet-switched data networks** and the key **Internet protocols** that make up the **TCP/IP communications suite**.
10. Describe the relationship between the Internet infrastructure and key **networked application architectures**.

## Course Syllabus

[IST 233 Spring 2021 Syllabus- Pavel Islam](#)

[IST 233 Fall 2021 Syllabus- Bruce Boardman](#)

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## Other iSchool Courses

- [IDS 301 - What's the Big Idea?: Technology Innovation](#)
- [IDS 302 - Idea2Startup](#)

- [IDS360 - Entrepreneurial Immersion Experience](#)
- [IDS 403 - iLaunchPad](#)
- [IST 101 - First Year Forum](#)
- [IST 195 - Information Technologies](#)
- [IST 233 - Intro to Computer Networking](#)
- [IST 256 - Appl.Prog.For Information Syst](#)
- [IST 263 - Intro to Front-End Web Dev](#)
- [IST 300 - Digital Platforms](#)
- [IST 300 - The Power of Information](#)
- [IST303 - Global Financial Systems Architecture](#)
- [IST 305 - Globalization: Collaboration, Culture, Systems & Data](#)
- [IST 322 - Digital Strategy & Analytics for the Web](#)
- [IST 323 - Intro to Information Security](#)
- [IST325 - Information Management Consultation](#)
- [IST 335 - Intro/Info Based Organizations](#)
- [IST 336 - Leading Issues in Info Security](#)
- [IST 337 - IM&T Support Practicum](#)
- [IST 341 - Human-Centered Design](#)
- [IST 342 - Information Security Policy](#)
- [IST 343 - Data in Society](#)
- [IST 344 - Info Reporting & Presentation](#)
- [IST 345 - Managing Info Systems Projects](#)
- [IST 346 - Info Tech Mgmt & Administration](#)
- [IST349 - Human-Computer Interaction](#)
- [IST 352 - Info Analysis of Org. Systems](#)
- [IST 359 - Intro to Data Base Mgmt Sys](#)
- [IST 363 - Advanced Front End Web Design](#)
- [IST 382 - Cultural Competence for Information Professionals](#)
- [IST 387 - Intro to Applied Data Science](#)
- [IST 426 - Information Justice and Community Engagement](#)
- [IST 400 - Blockchain Management](#)
- [IST 402 - Digital Forensics](#)
- [IST 407 - Advanced Data Analytics](#)
- [IST 414 - Data Driven Inquiry](#)
- [IST 419 - Economics for Info Mgmt](#)
- [IST 421 - Information Visualization](#)
- [IST 425 - Enterprise Risk Management](#)
- [IST 429 - Technology & the Future of Work](#)
- [IST431 - Security in Networked Environments](#)
- [IST 442 - Agile Project Management](#)
- [IST443 - Critique of the Information Age](#)
- [IST447 - Complex Issues in IT Project Management](#)
- [IST448 - Enterprise Wireless Networks](#)
- [IST 452 - Advanced Computer Networking](#)
- [IST453 - Telecommunications Regulations](#)
- [IST456 - Information Policies and Decision Making](#)
- [IST462 - Scripting for Data Analysis](#)
- [IST 466 - Prof Issues/Info Mgmt & Tech](#)
- [IST469 - Advanced Database Management Systems](#)
- [IST471 - Internship in Info Mgmt & Tech](#)
- [IST472 - Coop Educ in Info Mgmt & Tech](#)
- [IST475 - Full Stack Web Development](#)
- [IST476 - Applied Information Security](#)
- [IST 477 - Research in Innovation, Society, and Technology](#)
- [IST 486 - Social Media in the Organiz.](#)
- [IST 523 - Graphic Design for the Web](#)