• Instructor: Prof. Kihong Park
• Class: TTh 1:30–2:45pm (POTR 262)
• E-mail: park@cs.purdue.edu
• Tel.: (765) 494–7821 (CS 220)
• Office Hours: TTh 3–4pm and by appointment

• Course Homepage:
  http://www.cs.purdue.edu/~park/cs536.html
• **Teaching Assistant**: Tiberiu Stef

• **E-mail**: tstef@cs.purdue.edu

• **Tel.**: (765) 494-7840 (CS 266)

• **Office Hours**: W 3:30-4:30pm, F 2:30-4:30pm
• **Course Content**: Graduate-level introductory course to computer networks and data communication
  - Theory (40%)
  - Practice (60%)

• **Prerequisites**:
  - Operating systems
  - Solid background in C and UNIX (experience with projects and low-level programming)
  - Sound undergraduate-level mathematical preparation (calculus, probability and statistics, differential equations)
• Text Book:
  - Papers and other reference material will be provided by web or hardcopy.
• **Grading Policy:**
  - Homework assignments (40 %); bi-weekly
  - Midterm (30 %)
  - Final (30 %)

• **Academic Honesty:**
  - Initial discussion on homework assignments is fine
  - Collaboration is not allowed
  - Academic dishonesty is a serious matter and dealt with in accordance with University policy
• Computing Requirements:
  – Internet access: ssh and WWW
  – Purdue computer account: Xinu Lab
  – xinu1.cs.purdue.edu, xinu2.cs.purdue.edu, ...
  – xinuserver.cs.purdue.edu
  – Candace Walters (clw@cs.purdue.edu, 494–9206)
• Computing Platform :
  - x86-based PCs, UNIX (Solaris)
  - 100Mbps Ethernet
  - TCP/IP network programming (e.g., client/server, routers)
  - ATM network (≈2.4Gps switch, 155Mbps interfaces)
  - IP-over-SONET backbone (Internet2/Abilene)
Outline

- Introduction (3 lectures)
- Fundamentals of information transmission and coding (3 lectures)
- Direct link communication I: wired media (3 lectures)
- Direct link communication II: wireless media (2 lectures)
- End-to-end communication: packet switching and circuit switching (1 lecture)
• Internetworking with TCP/IP: structure (1 lecture)
• Socket programming and network communication (2 lectures)
• —Midterm—
• Internetworking with TCP/IP: functionality (2 lectures)
• Congestion control (3 lectures)
• Routing (2 lectures)
• Network traffic: data and multimedia payloads (1 lecture)

• Multimedia communication and QoS (2 lectures)

• Transparent network services: DNS, HTTP, web server design, caching and CDNs (2 lectures)

• Network security: confidentiality, authentication, denial-of-service attack (1 lecture)

• —*Final*—
Questions?

- Tel.: (765) 494-7821
- E-mail: park@cs.purdue.edu
- Web: http://www.cs.purdue.edu/~park/cs536.html