

CS490-004: Lecture Note (Lecture #1, August 25, 2026)

1. **Distribute:**

- Course syllabus
- Attendance card
- Quiz #1 questions
- Quiz #2 questions

2. **Announcements:**

- Quiz #1 is due this Thursday (12:30pm, August 27)
- Quiz #2 is scheduled on September 1, 2026 (Tuesday next week)

3. **Course Syllabus**

- (a) Grading policy
- (b) Attendance policy
- (c) Exam policy
- (d) Rules/expectations

4. **Course website**

- URL:
- “Weekly Notice” section –

5. **Introduction to “Network Programming” (continued from our previous lecture)**

- The first three questions (#1, #2, #3) for Quiz #2
- The new topics (#4 - #22) for Quiz #2
 - (a) Concepts of “protocols” and “interface”
 - (b) OSI seven-layer model

- The functions (services) offered by the application-layer
- The functions (services) offered by the presentation and the session layers
- The functions (services) offered by the transport-layer
- The functions (services) offered by the network-layer
- The functions (services) offered by the datalink and the physical layers

(c) The Internet protocol-suite architecture

(d) Concepts of “connection-oriented” and “connection-less” communication modes.

- What are they?
- **D:** What are their (primary) advantages and disadvantages?

(e) Concepts of “network address” and “port”

- What are they?
- What are they for?

(f) Concepts of “the client-server” and “peer-to-peer” application models?

- **D:** Examples of the network applications based on “the client-server” model?
- **D:** Examples of the network applications based on “peer-to-peer” model?
- The API structure for network applications based on “the client-server” model
- The API structure for network applications based on “peer-to-peer” model

(g) Concepts of “unicast” and “multicast” transmission modes

- Visualizing unicast transmissions
- Visualizing multicast transmissions
- **D:** Examples of the network applications based on unicast transmissions
- **D:** Examples of the network applications based on multicast transmissions
- **D:** What are their (primary) advantages and disadvantages?