

COMP 3331/9331:
Computer Networks and
Applications

Mid-Term Exam Review
T1, 2024

Exam Specifics

- **Tuesday, 26th March (Week 7)** at regular lecture time (09:00 – 11:00)
- Marks: **20 marks (towards your final mark)**
- Online Inspira Exam (linked through Moodle)
- Precise Time: **09:15 – 10:30 (75 minutes)**, no separate reading time
- Answer all questions, each question has different marks as noted. No negative marking (minimum mark on any question is zero)
- No new lecture content will be covered on that day
- Open book, notes. You may use calculators
- **Recommendation:** Download lecture notes, homework sets and any other resources from WebCMS to your machine to avoid overloading the WebCMS server
- You **may join** the Zoom Meeting (link posted on Midterm Exam page)
 - Ask any questions you may have in the chat
 - DO NOT turn on your microphone
- Check [mid-term exam page](#) on website
- ELS Students: Your exam will be configured to run for a duration as per your requirements. The start time will be the same (09:15)

Key topics: Introduction (Weeks 1 & 2)

- Packet Switching/Circuit Switching
- Delay, Loss, Throughput
- Protocol Layering
- Excluded
 - Won't ask you to work through complex probability computations but there may be questions on basic probability
 - Physical media
 - Networks under attack: security
 - History

Key topics: Applications (Week 2 & 3)

- Principles
- Web/HTTP
- E-mail (SMTP only)
- DNS
- P2P, BitTorrent
- Video Streaming and CDN
- Excluded
 - HTTPS (secure HTTP)
 - HTTP/2
 - IMAP, POP
 - DNSSEC, DNS over TLS, DNS over HTTP
 - Socket Programming

Key topics: Transport Layer (Weeks 4 & 5)

- Principles
- Sockets (Multiplexing/Demultiplexing)
- UDP
- Reliable Data Transfer concepts: RDT (1.0 to 3.0), GBN, SR
- TCP: Everything that we covered
- Excluded
 - QUIC, HTTP/3
 - Complex checksum computations (simplified calculations could be included)
 - Congestion Control: Principles and TCP Congestion Control algorithm (we leave this for this final exam)

Other Exclusions

- No programming related questions
- No questions that ask you to use the tools from the lab exercises such as traceroute, ping, dig, Wireshark, etc.
- However, you may be shown output from execution of these tools and ask you questions to explain the observations.

Type of Questions

- A limited number of multiple-choice questions
- A few short answer questions
 - 2-4 sentences
- Some questions that may require more elaborate explanations
- Show intermediate work/steps if relevant (unless told not to)
- Not a memory (or cut-paste) test, questions will examine your understanding of concepts
- Tests your critical analysis skills
- Tests whether you can apply the concepts in a (new) practical setting

Preparation

- How to prepare?
 - Read and thoroughly understand all content
 - You shouldn't be reading a concept for the first time during the exam !!
 - **Practice, Practice, Practice**
 - Go through all the homework questions, quizzes, etc.
 - DO NOT simply read the solutions, **attempt to solve them** before looking at solutions
 - Practice Mid-term Exam link posted on Mid-term Exam Page - open till 08:30 am, 26th March
 - Familiarizes you with the exam environment (Inspera) – **important**
 - Familiarizes you with the type of questions
 - Take it under similar conditions as when you sit for the actual exam
 - **Can ONLY attempt once in Inspera so only attempt when ready**
 - PDF versions of the exam + answers will be posted on the mid-term page
- Inspera Resources - <https://www.student.unsw.edu.au/exams/inspera>
- If you have questions
 - Post on forum
 - Attend consults: Weekly consult on Tuesday 4:30 – 5:30 (link on webpage) and extra slot on Monday, 25th March 5-6pm (link will be available on the course notice page)

Exam Day

- Have a good sleep and eat some food before the exam
- Have water handy
- Make sure you are in a quiet and comfortable environment
- Don't panic and get stressed if you cannot figure out one question, move on
- If you encounter technical issues with Inspira, take screenshots and contact us via the Zoom chat or email: cs3331@cse.unsw.edu.au.

Good luck

Exams

Teachers



Nerds



Me



The Topper

