

COMP 3331/9331:  
Computer Networks and  
Applications

**Mid-Term Exam Review**  
**T2, 2021**

# Exam Specifics

- **Monday, 12<sup>th</sup> July** at regular lecture time (13:00 – 15:00)
- Marks: **20 marks (towards your final mark)**
- Online Inspira Exam (linked through Moodle)
- Precise Time: **13:10 – 14:20 (70 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: We will email you next week with details about your arrangements

# Key topics: Introduction

- 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
  - Specifics of access networks, physical media
  - Networks under attack: security
  - History

# Key topics: Applications

- Principles
- Web/HTTP
- E-mail (SMTP only)
- DNS
- P2P, BitTorrent, DHT
- 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

- Principles
- Sockets (Multiplexing/Demultiplexing)
- UDP
- Reliable Data Transfer concepts: RDT (1.0 to 3.0), GBN, SR
- TCP: Everything that we covered
- Excluded
  - QUIC
  - Complex checksum computations
  - Congestion Control: Principles and TCP specifics (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.

# Type of Questions

- A limited number of multiple-choice questions
- A few short answer questions
  - 2-3 sentences at most
- Some questions (possibly multi-part) 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 will be posted on Mid-term Exam Page by Friday (2<sup>nd</sup> July)
    - Familiarizes you with the exam environment (Inspira)
    - Familiarizes you with the type of questions
    - Take it under similar conditions as when you sit for the actual exam
- Inspira Resources
  - [Video](#) providing overview on Inspira
  - Inspira Resources [page](#)
- If you have questions
  - Post on forum
  - Attend consults – additional consults to be announced for Week 6



# 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/Ed forum/email: [cs3331@cse.unsw.edu.au](mailto:cs3331@cse.unsw.edu.au).

Good luck

## Exams

Teachers



Nerds



Me



The Topper

