COMP5349 Cloud Computing

Week 1: Administrivia
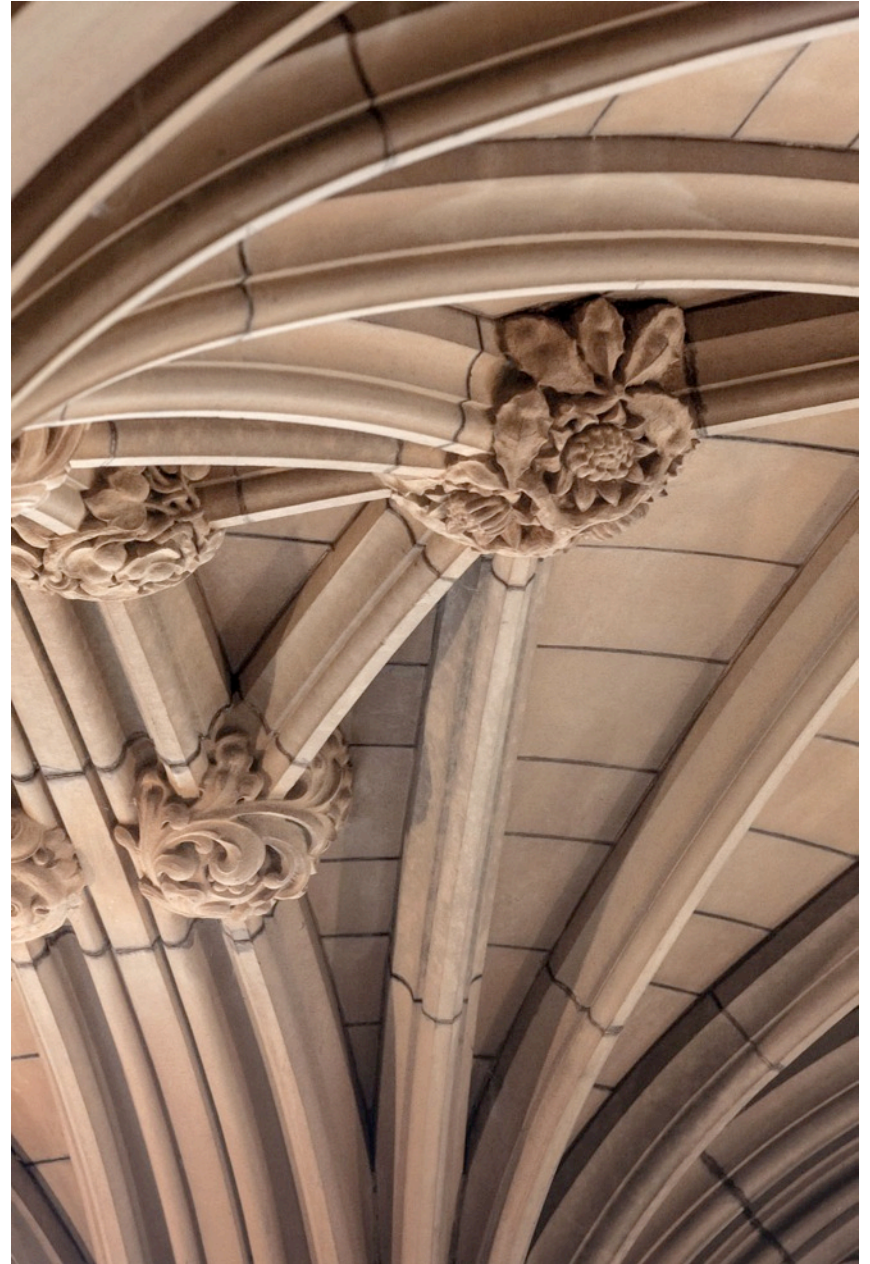
Unit Coordinator

Dr. Ying Zhou

School of Computer Science

Welcome to COMP5349

Lecturer:

Dr. Ying Zhou
SVD Building J12, Level 4
ying.zhou@sydney.edu.au

Lectures: Thursdays, 2pm – 4pm in Carslaw 159

Tutorials/Lab:

Five labs on Thursday 4-6pm

Four labs on Friday 4-6 pm

TA and Tutors

- Course TA
  - Chenhao Huang (chua5342@uni.sydney.edu.au)
- Tutors
  - John Ed Alvinez (jalv7428@uni.sydney.edu.au)
  - jiaan Guo (jguo4890@uni.sydney.edu.au)
  - Haoyu He (haoyu.he@sydney.edu.au)
  - Chenhao Huang (chua5342@uni.sydney.edu.au)
  - Haoyu He (haoyu.he@sydney.edu.au)
  - Amyra Meidiana (amei2916@uni.sydney.edu.au)
  - Martina Tian (mtia5385@uni.sydney.edu.au)
  - Shaojun Zhang (szha6955@uni.sydney.edu.au)

Tutorial Arrangement

ID	Time	Venue	Student cohort	Tutor
R16A	Thu4-6pm	SIT114 (30)	mixed	Chenhao
R16B	Thu4-6pm	SIT115 (30)	mixed	John
R16C	Thu4-6pm	SIT117 (20)	on-campus	Haoyu
R16E	Thu4-6pm	SIT130B (25)	mixed	Jiaan
R16H	Thu4-6pm	SIT457 (20)	SC	Shaojun
F16A	Fri4-6pm	SIT118 (20)	on-campus	John
F16B	Fri4-6pm	SIT117 (20)	mixed	Martina
F16C	Fri4-6pm	SIT116 (20)	mixed	Amyra
F16E	Fri4-6pm	SIT457 (20)	SC	Shaojun

- We have reallocated small number of students to have
  - 2 designated labs for special cohort students
    - Lab SIT457 on Thursday and Friday are running online only lab, if you are on campus and are allocated to room 457 please contact Chenhao (chua5342@uni.sydney.edu.au) to get reallocated
  - 2 labs with on campus students only (R16C SIT117 & F16A SIT 118)
    - If you are a special cohort student and get allocated to these two labs, please contact Chenhao (chua5342@uni.sydney.edu.au) to get reallocated
  - 5 labs with mixed cohort
    - Tutor will use zoom to share the screen to online students
- There is an optional Git lab this week. You don't need to go if you already know Git. Tutors will use this lab to test online learning though

Outline of the Lecture

Week	Topic
Week 1	Cloud Computing Overview and Data Center
Week 2	Virtualization Technology
Week 3	Container Technology
Week 4	GFS and MapReduce
Week 5	Apache Spark
Week 6	Scheduling
Week 7	MapReduce Design Pattern
Easter Break (April 10 – April 17	
Week 8	Spark Data Mining
Week 9	Spark Data Mining II
Week 10	Cloud Storage
Week 11	Cloud Application
Week 12	Benchmarking Cloud Services
Week 13	Unit of Study Review

Course Material / Online Resources

- The course does not have required textbook
  - Each week's reference materials will be put on the slides
- Copies of the lecture slides/lab instructions will be available for download on Canvas site
- The lectures will be recorded
- We use Ed for discussion forum
- We use university's Github to release code samples used in lab/lecture

Assessment Package

Assessment Tasks
- Code challenge (week 6) 10%
- Quiz (week 8) 10%
- Group project (week 11) 20%
- Written Exam   60%

University rule for late penalty

- 5% penalty for each day; after 10 days: 0

    - A good assignment that would normally get 9/10 and is 2 days late loses 10% of the full 10 marks, i.e. new mark = 8/10

Marks will be published on Canvas
- Report any errors or omissions within 10 days!

School Policy
You must obtain at **40% in the final exam,** as well as an **overall mark of at least 50%,** to pass the unit!

Technical Expectations

- You need general knowledge on computer architecture, operating systems, networking, etc.
- Most labs run on the cloud
  - You need to connect remotely through a _terminal_ to a virtual machine
  - You need to be familiar/comfortable with simple shell commands
  - The tutor will not spend time on answering basic questions like what is 'cd'? why I get command not found issue? what is permission denied? What is **pwd**?
- You should have enough development experience, preferable in Python
  - The teaching language is Python
  - The code challenge (10%) runs in Python
  - The group project can be implemented in Python or Java
  - You should know how to read API documents
  - You are used to the practice of debugging and reading error messages
    - We did find in the past a lot of students never read error messages

Special Considerations and Academic Honesty

Applying for Special Consideration

– If your performance is affected by **illness** or **misadventure**

  – you can apply for special consideration   (online webform)

  – Have professional practitioner sign special USyd form

  – Submit application for special consideration online, upload scans

  – Note: the application has to be lodged **online within 3 days**

  – http://sydney.edu.au/current_students/special_consideration/

– Notify us by email *as soon as anything begins to go wrong*

  – **Don't wait for answers, but submit your assignment**

– There is a similar process if you need special arrangements for religious observance, military service, representative sports, etc

Academic integrity (University policy)

"The University of Sydney is unequivocally opposed to, and intolerant of, plagiarism and academic dishonesty.

Academic dishonesty means seeking to obtain or obtaining academic advantage for oneself or for others (including in the assessment or publication of work) by dishonest or unfair means.

Plagiarism means presenting another person's work as one's own work by presenting, copying or reproducing it without appropriate acknowledgement of the source."

http://sydney.edu.au/elearning/student/EI/index.shtml

Academic integrity (University policy)

- Submitted work is compared against other work
  - eg. Turnitin for textual tasks (through eLearning), other systems for code similarity checking
  - Both assignments: in class demo with questions to each team member -> marks to be reduced in case of not equal participation
- Penalties for academic dishonesty or plagiarism can be severe
- Complete required self-education AHEM1001

Academic Integrity Practice

School of Computer Science
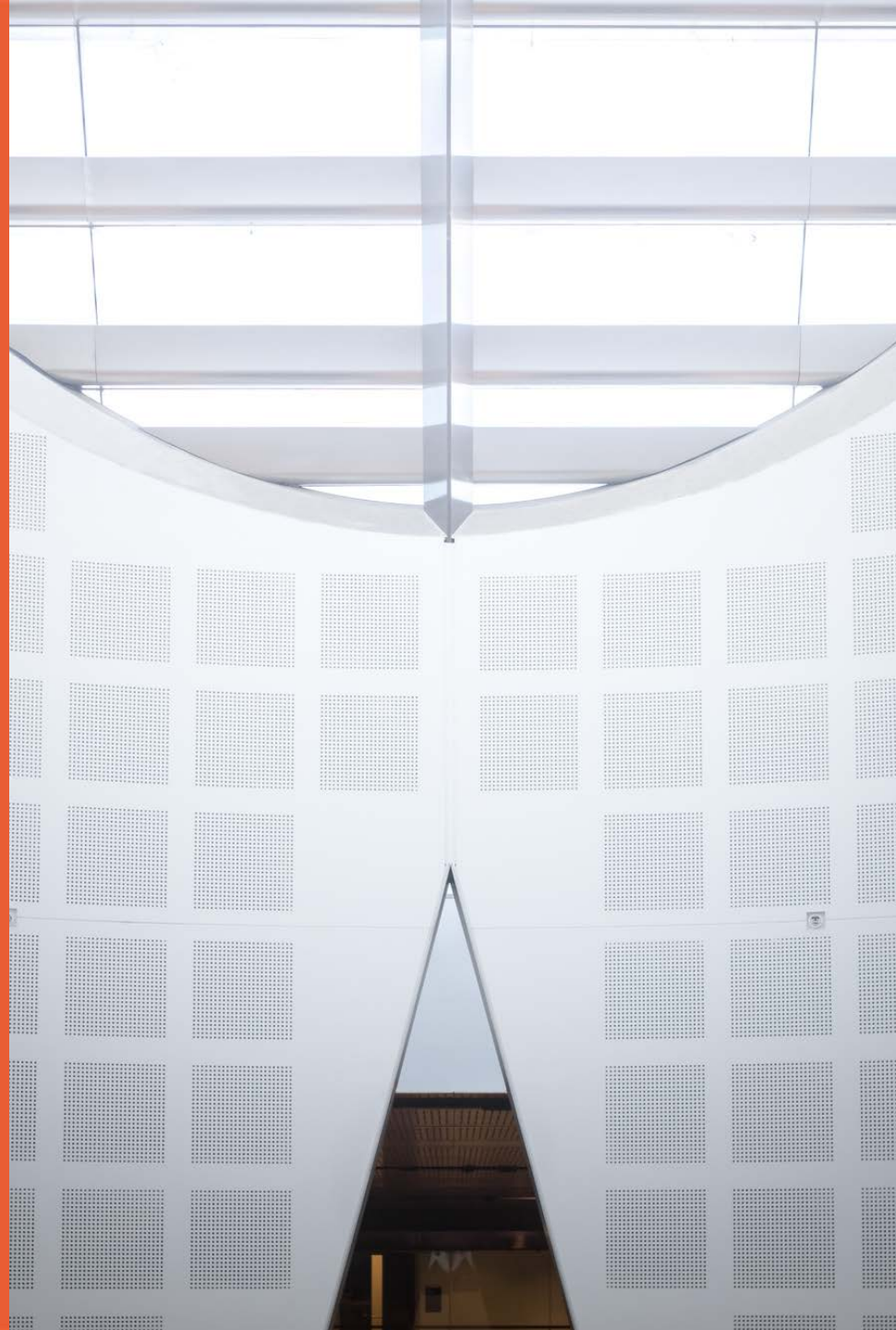
Different levels/types of Academic Integrity practice

- Source:
  - Different types of sources of help are accepted for different academic levels (Junior, Intermediate, Senior, Postgraduate)

- Nature of Help:
  - Different types of help are accepted for different types of assessment.

- Two slides explaining "Source" and "Nature" of help allowed
- You can adjust the chart to suite the academic integrity requirement for your assessments.

Example 1: Junior level programming UoS

Types of Help

Understanding General Concepts	Explained using similar material (not assignment)	Sharing approach/concept to derive assignment solution	Designing code/solution	Implementing code/solution

- Individual assessment
- A student needs to gain an understanding of fundamental knowledge/skills
- It is important to master the knowledge/skills themselves
- Students are encourage to obtain help through relevant teaching material and practices but not directly on assessment materials

🟩 Encouraged
🟨 Attribution required
🟥 Not acceptable
⬜ Ask Lecturer/Coordinator

Example 2: Intermediate/Senior level specialist UoS

Source of Help

Lecturer	Teaching Assistants / Tutors	Classmates	Private tutors	Online forums/ Online tutors	Students outside course/UoS	Hired coders / Tutorial Company outside University	Relatives	Other

- Individual assessment
- A student needs to gain an understanding of high level knowledge/skills
- A student needs to gain skills to find, evaluate and apply existing knowledge/solutions

☐ Encouraged
☐ Attribution required
☐ Not acceptable
☐ Ask Lecturer/Coordinator

Example 2: Intermediate/Senior level specialist UoS

Types of Help

Understanding General Concepts	Explained using similar material (not assignment)	Sharing approach/concept to derive assignment solution	Designing code/solution	Implementing code/solution

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Health and Safety

General Housekeeping – Use of Labs

- Keep work area clean and orderly
- Remove trip hazards around desk area
- No food and drink near machines
- No smoking permitted within University buildings
- Do not unplug or move equipment without permission

EMERGENCIES – Be prepared

Safety Health & Wellbeing

THE UNIVERSITY OF SYDNEY

Safety Health & Wellbeing   University Home   Staff intranet   Contacts

University of Sydney   GO

Policy & strategy | Responsibilities | Managing Safety | A-Z | Health & wellbeing | Consultation | Report incident/hazard | Staff Health Support | **Emergency** | Contact

You are here: Home / WHS / Emergency

EMERGENCY

> **What to do in an emergency**
> First aid
> Incident & accident reporting
> Chief building wardens
> Emergency management
> Building emergency procedures
> Handling of suspicious packages
> ChemAlert
> Mercury spills

WHAT TO DO IN AN EMERGENCY

Emergencies can occur at any time for a variety of reasons. The first priority is always your safety.

We have standard emergency response procedures for a range of emergencies. It is important that you understand these procedures.

Watch this short video for an introduction to our procedures for emergency evacuation, emergency lockdown and medical emergencies.

EMERGENCIES
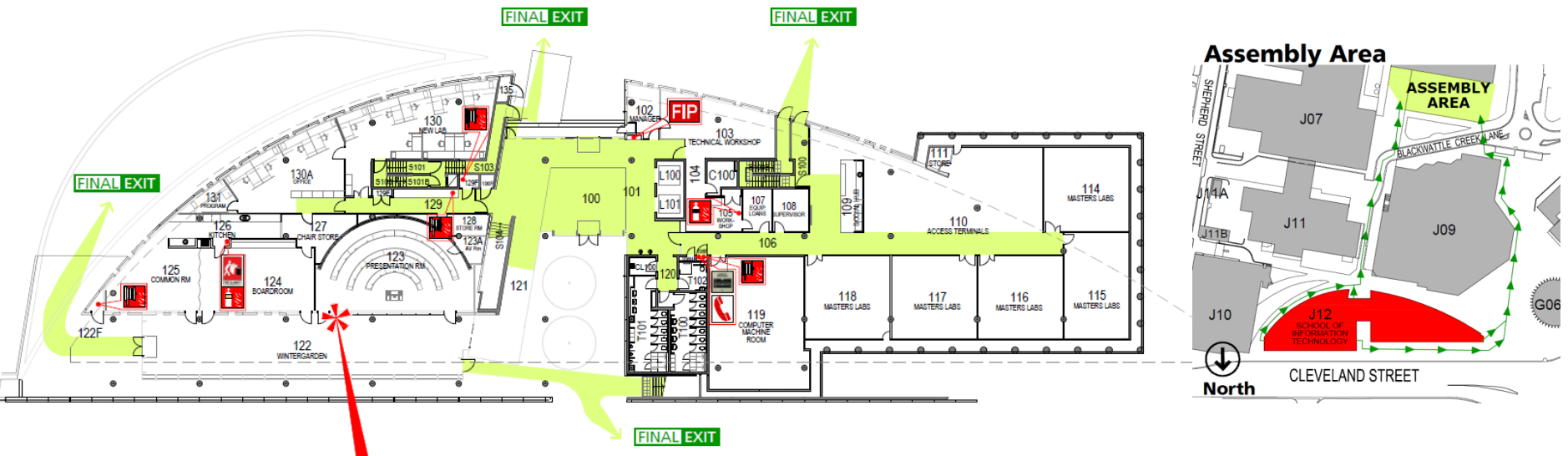
EMERGENCIES

Evacuation Procedures

ALARMS

🔊)) BEEP... BEEP... Prepare to evacuate

1. Check for any signs of immediate danger.
2. Shut Down equipment / processes.
3. Collect any nearby personal items.

🔊)) WHOOP... WHOOP... Evacuate the building

1. Follow the **EXIT** exit signs.
2. Escort visitors & those who require assistance.
3. DO NOT use lifts.
4. Proceed to the assembly area.

EMERGENCY RESPONSE

1. Warn anyone in immediate danger.
2. Fight the fire or contain the emergency, if safe & trained to do so.

If necessary...

3. Close the door, if safe to do so.
4. Activate the "Break Glass" Alarm or
5. Evacuate via your closest safe exit. **EXIT**
6. Report the emergency to 0-000 & 9351-3333

MEDICAL EMERGENCY

– If a person is seriously ill/injured:

1. **call an ambulance 0-000**

2. **notify the closest Nominated First Aid Officer**

   If unconscious– send for Automated External Defibrillator (AED)
   AED **locations**.

   NEAREST to CS Building (J12)
   - Electrical Engineering Building, L2 (ground) near lifts
   - Seymour Centre, left of box office
   - Carried by all Security Patrol vehicles

3. **call Security -** 9351-3333

4. **Facilitate the arrival of Ambulance Staff (via Security)**

Nearest Medical Facility
University Health Service in Level 3, Wentworth Building

First Aid kit – SIT Building (J12)
kitchen area adjacent to Lab 110

School of Computer Science Safety Contacts

CHIEF WARDEN
Greg Ryan
Level 1W 103
9351 4360
0411 406 322

FIRST AID OFFICERS

Julia Ashworth
Level 2E Reception
9351 3423

Will Calleja
Level 1W 103
9036 9706
0422 001 964

Katie Yang
Level 2E 237
9351 4918

Orally REPORT all INCIDENTS & HAZARDS to your SUPERVISOR

OR

Undergraduates: to Katie Yang
9351 4918

Coursework
Postgraduates: to Cecille Faraizi
9351 6060
or Keiko Narushima
8627 0872

CS School
Manager: Priyanka Magotra
8627 4295

Assistance

– There are a wide range of support services available for students

– Please make contact, and get help

– You are not required to tell anyone else about this

– If you are willing to inform the unit coordinator, they may be able to work with other support to reduce the impact on this unit

  – eg provide advice on which tasks are most significant

DISABILITY SERVICES

Do you have a disability?

– You may not think of yourself as having a 'disability' but the definition under the **Disability Discrimination Act** is broad and includes temporary or chronic medical conditions, physical or sensory disabilities, psychological conditions and learning disabilities.

– The types of disabilities we see include:

– anxiety, arthritis, asthma, asperger's disorder, ADHD, bipolar disorder, broken bones, cancer, cerebral palsy, chronic fatigue syndrome, crohn's disease, cystic fibrosis, depression, diabetes, dyslexia, epilepsy, hearing impairment, learning disability, mobility impairment, multiple sclerosis, post traumatic stress, schizophrenia , vision impairment, and much more.

– Students needing assistance must register with Disability Services –

    – it is advisable to do this as early as possible.

– http://sydney.edu.au/study/academic-support/disability-support.html

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The types of disabilities we see include:
Anxiety // Arthritis // Asthma // Autism // ADHD
Bipolar disorder // Broken bones // Cancer
Cerebral palsy // Chronic fatigue syndrome
Crohn's disease // Cystic fibrosis // Depression
Diabetes // Dyslexia // Epilepsy // Hearing impairment //
Learning disability // Mobility impairment // Multiple
sclerosis // Post-traumatic stress // Schizophrenia //
Vision impairment
and much more.

Students needing assistance must register with Disability Services. It is advisable to do this as early as possible. Please contact us or review our website to find out more.

THE UNIVERSITY OF
SYDNEY

Disability Services Office
sydney.edu.au/disability
02-8627-8422

Other support

- Learning support
  - http://sydney.edu.au/study/academic-support/learning-support.html
- International students
  - http://sydney.edu.au/study/academic-support/support-for-international-students.html
- Aboriginal and Torres Strait Islanders
  - http://sydney.edu.au/study/academic-support/aboriginal-and-torres-strait-islander-support.html
- Student organization (can represent you in academic appeals etc)
  - http://srcusyd.net.au/ or http://www.supra.net.au/
- Please make contact, and get help
- You are not required to tell anyone else about this
- If you are willing to inform the unit coordinator, they may be able to work with other support to reduce the impact on this unit
  - eg provide advice on which tasks are most significant

Advice

- Metacognition
  - Pay attention to the learning outcomes in CUSP
  - Self-check that you are achieving each one
  - Think how each assessment task relates to these
- Time management
  - Watch the due dates
  - Start work early, submit early
- Networking and community-formation
  - Make friends and discuss ideas with them
  - Know your tutor, lecturer, coordinator
  - Keep them informed, especially if you fall behind
    - Don't wait to get help
- Enjoy the learning!

Covid-19 Advice

Coronavirus (COVID-19)

- We can protect ourselves by following good hygiene, for example:

    - **Washing our hands regularly,** for at least 20 seconds with soap and water, or by using an alcohol-based hand rub

    - **Applying good cough etiquette** - covering your mouth when coughing and sneezing with a tissue or a flexed elbow

    - **Avoiding close contact with anyone with cold or flu symptoms**, e.g. fever, cough, runny nose or shortness of breath

Coronavirus (COVID-19)

– **All staff and students who have cold or flu symptoms should isolate themselves from others**

– If you have a non-infectious condition such as asthma or hayfever please let your teacher and classmates know

– If you are otherwise unwell with cold or flu symptoms please excuse yourself from this class and **we will support you to continue the work remotely**

– Make sure you read the information on **special consideration in the unit outline.**

Coronavirus (COVID-19)

– The University is following advice from the government and related public health authorities

  – For the latest information, see the advice on the University website

– It's important to remember that the University is a **respectful environment and that racism won't be tolerated** in the classroom, online or on campus

  – Student video

– Please take care of each other and yourselves and if you need support reach out to your unit coordinator or the health and wellbeing area of the Current Student website

Reminder

For the second and subsequent sessions

Coronavirus (COVID-19)

- The risk of contracting coronavirus (COVID-19) remains very low. This may change and the University is still monitoring the situation closely.
    - For the latest information, see the <u>advice on the University website</u>
- Remember good hygiene practices: -
    - Frequent handwashing
    - Cough etiquette
    - Cough or sneeze into a tissue or your flexed elbow.

Coronavirus (COVID-19)

–   If you have a known medical condition that is not infectious, but have respiratory symptoms, such as asthma or hayfever, please be open with the people around you, they will be understanding

–   If you are otherwise unwell or exhibiting respiratory symptoms (e.g. fever, cough, runny nose) we ask that you please exclude yourself from the class (even if you are wearing a surgical mask) and we will support you to continue the work remotely or bring you up to speed asap

–   Make sure you read the information on special consideration in the unit outline

Coronavirus (COVID-19)

- – The University is a respectful environment and that racism won't be tolerated in the classroom, online or on campus
    - – Student video