COMP3100
Distributed Systems
Session 1, Weekday attendance, North Ryde 2020
Department of Computing

Coronavirus (COVID-19) Update
Due to the Coronavirus (COVID-19) pandemic, any references to assessment tasks and on-campus delivery may no longer be up-to-date on this page.
Students should consult iLearn for revised unit information.
Find out more about the Coronavirus (COVID-19) and potential impacts staff and students

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Disclaimer
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General Information

Unit convenor and teaching staff
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Credit points
10

Prerequisites
130cp at 1000 level or above including (COMP2100 or COMP202) and (COMP2250 or COMP247)

Corequisites

Co-badged status

Unit description
A distributed system traditionally refers to a group of networked computers; however, it should be today understood in a much wider sense including applications consisting of multiple processes. This unit studies the fundamentals of distributed systems from both hardware perspective and software perspective. The unit also gives some hands-on experience. Topics include distributed systems principles (concurrency and scheduling), paradigms (cloud computing, mobile computing and Internet of Things), architectures (client-server model, peer-to-peer model and distributed file systems) and techniques (shared memory and message-passing).

Important Academic Dates
Information about important academic dates including deadlines for withdrawing from units are available at https://students.mq.edu.au/important-dates

Learning Outcomes
On successful completion of this unit, you will be able to:

ULO2: compose distributed systems to create a single system.
ULO3: apply theoretical principles and models to design distributed systems.
ULO4: appraise challenges and issues in modern distributed systems.
ULO5: discriminate between appropriate technologies for building practical distributed systems.
Assessment Tasks

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Delivery and Resources

Coronavirus (COVID-19) Update
Any references to on-campus delivery below may no longer be relevant due to COVID-19.
Please check here for updated delivery information: https://ask.mq.edu.au/account/pub/display/unit_status

Text Books


Soft copy of the first two books is “freely” available online.

iLearn Unit Home Page

COMP3100 will make extensive use of the iLearn course management system, including for delivery of class materials, discussion boards, submission of work and access to marks and feedback. Students should check the iLearn site (https://ilearn.mq.edu.au) regularly for unit updates.

Questions and general queries regarding the content of this unit, its lectures or practical classes, or its assessments should be posted to the discussion boards on the COMP3100 iLearn site. In particular, any questions which are of interest to all students in this unit should be posted to one of these discussion boards, so that everyone can benefit from the answers. Questions of a private nature should be directed to the unit teaching staff.
Lectures

Lectures are a core learning experience where we will discuss the theoretical underpinnings and concepts that are essential to this unit. Key ideas for the group project will be discussed from time to time in lectures. Attendance at lectures is highly recommended. Lectures will be recorded on echo360 but some lectures will include interactive components that may not be adequately captured by a recording.

Workshops

Tutorial classes commence in Week 2. Each week has two hours of tutorial class. Each week you should prepare your solutions to the set tutorial questions and attend your enrolled tutorial class. Tutorial classes also provide an opportunity to (collaboratively) work on group project.

Unit Schedule

Coronavirus (COVID-19) Update

The unit schedule/topics and any references to on-campus delivery below may no longer be relevant due to COVID-19. Please consult iLearn for latest details, and check here for updated delivery information: [https://ask.mq.edu.au/account/pub/display/unit_status](https://ask.mq.edu.au/account/pub/display/unit_status)

The detailed unit schedule will be available on iLearn. The following is an approximate schedule and is subject to change. In all cases, refer to iLearn for up-to-date information.

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Textbook</th>
<th>Quiz</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction to Distributed Systems</td>
<td>M&amp;A Ch 1, Coulouris Ch 1</td>
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<tr>
<td>2</td>
<td>System models, Architectures, and Networks</td>
<td>M&amp;A Ch 2, Coulouris Chs 2 and 3</td>
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<tr>
<td>3</td>
<td>Communication</td>
<td>M&amp;A Ch 4, Coulouris Ch 4</td>
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<td>4</td>
<td>Naming and Distributed file systems</td>
<td>Coulouris Ch 13 and M&amp;A Ch 5, and Coulouris Ch 12</td>
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<tr>
<td>5</td>
<td>Synchronisation and concurrency</td>
<td>M&amp;A Ch 6, Coulouris Chs 14 and 16</td>
<td>Q1</td>
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<tr>
<td>6</td>
<td>Fault tolerance and Security</td>
<td>M&amp;A Chs 8&amp;9, Coulouris Ch 15</td>
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<td></td>
<td>Mid-semester break 1</td>
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<tr>
<td></td>
<td>Mid-semester break 2</td>
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Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- Academic Appeals Policy
- Academic Integrity Policy
- Academic Progression Policy
- Assessment Policy
- Fitness to Practice Procedure
- Grade Appeal Policy
- Complaint Management Procedure for Students and Members of the Public
- Special Consideration Policy (Note: The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.)

Students seeking more policy resources can visit the Student Policy Gateway (https://students.mq.edu.au/support/study/student-policy-gateway). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit Policy Central (https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/study/getting-started/student-conduct
Results

Results published on platform other than eStudent, (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in eStudent. For more information visit ask.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Student Support

Macquarie University provides a range of support services for students. For details, visit http://students.mq.edu.au/support/

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to improve your marks and take control of your study.

- Workshops
- StudyWise
- Academic Integrity Module for Students
- Ask a Learning Adviser

Student Enquiry Service

For all student enquiries, visit Student Connect at ask.mq.edu.au

If you are a Global MBA student contact globalmba.support@mq.edu.au

Equity Support

Students with a disability are encouraged to contact the Disability Service who can provide appropriate help with any issues that arise during their studies.

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the Acceptable Use of IT Resources Policy. The policy applies to all who connect to the MQ network including students.

Changes since First Published

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
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<tbody>
<tr>
<td>12/02/2020</td>
<td>Fixed late submission</td>
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