



# COMP7900

## Research Frontiers in Computing 1

Session 1, Special circumstances 2021

*School of Computing*

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#### Disclaimer

Macquarie University has taken all reasonable measures to ensure the information in this publication is accurate and up-to-date. However, the information may change or become out-dated as a result of change in University policies, procedures or rules. The University reserves the right to make changes to any information in this publication without notice. Users of this publication are advised to check the website version of this publication [or the relevant faculty or department] before acting on any information in this publication.

#### Notice

As part of [Phase 3 of our return to campus plan](#), most units will now run tutorials, seminars and other small group activities on campus, and most will keep an online version available to those students unable to return or those who choose to continue their studies online.

To check the availability of face-to-face activities for your unit, please go to [timetable viewer](#). To check detailed information on unit assessments visit your unit's iLearn space or consult your unit convenor.

## General Information

Unit convenor and teaching staff Mehmet Orgun <a href="mailto:mehmet.orgun@mq.edu.au">mehmet.orgun@mq.edu.au</a>
Credit points 10
Prerequisites Admission to MRes
Corequisites
Co-badged status
Unit description <p>This unit is designed to engage students with current research in computing. It will introduce students to a number of the current open research questions across the range of the broad discipline. It is the first of a pair of such units, with the second appearing in the second year of the MRes program. This unit addresses research across the breadth of the discipline, while the second unit will focus on more particular issues related to the student's project area.</p> <p>Activities may include such things as seminar attendance, directed reading of research papers, the discussion and critiquing of research topics and introduction to new practical techniques with preparatory reading, hands-on experience and a final report. Presentation of a seminar and a written report based on the topics examined are required for completion of this unit.</p>

## Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

## Learning Outcomes

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

**ULO2:** Summarize the state of art in selected disciplines of Computing

**ULO1:** Demonstrate an understanding of research being done in the Department of Computing

**ULO3:** Interpret and apply the principles of ethical conduct in selected disciplines of Computing

**ULO4:** Write a critical overview of a research topic

**ULO5:** Present a research topic orally

## General Assessment Information

**Note that COMP7900 does not have a final examination and therefore the final grades will be determined by the assessment tasks attempted throughout the semester.**

The deadlines of the assessment tasks are tentative. Please consult iLearn for any possible updates.

## Late submission

No extensions will be granted without an approved application for Special Consideration. There will be a deduction of 20% of the total available marks made from the total awarded mark for each 24 hour period or part thereof that the submission is late. For example, 25 hours late in submission for an assignment worth 10 marks will result in 40% penalty or 4 marks deducted from the total.

## Grading rubric for the first and second final reports

Criterion	Fail	Pass	Credit	Distinction and High Distinction
Abstract	Missing abstract or incomplete, in that it does not provide a brief statement of the problem, significance and state of the art.	Conveys the problem, significance and state of the art, but in a little less clearly than might be expected, or at an inappropriate level of detail.	Stands as a surrogate for the full report: a clear summary of the problem, significance and state of the art; but may require some rewording to make it accessible to a non-specialist.	An excellent summary that clearly states the problem, significance and state of the art, in a manner that is accessible to a technical but a non-specialist audience.
Introduction	The introduction does not clearly state the problem and significance.	The introduction does state the problem and significance, but it takes a little effort to disentangle.	The introduction states the problem clearly, and its significance is clear.	The introduction provides an exceptionally clear and well-motivated problem statement, presented in a way that makes the reader eager to learn about the details of the state of the art.
Review of related work	Patchy or badly organised review of related work; unclear why the work presented is relevant to the problem addressed.	The material covered seems comprehensive and relevant, and some attempt has been made at clustering the materials reviewed in a thematic manner.	Thematic organisation of the review, demonstrating a considered extraction of key ideas from sources and how they impact the problem at hand.	Thoughtful analysis of the material that goes beyond the themes identified explicitly by the sources, concisely drawing out the key points and comparing the approaches.
Ethical implications	There is no mention of ethical implications in the research area or it does not cover most of the fundamental ethical aspects.	Most of the fundamental ethical implications in the research area are covered.	The fundamental ethical implications are explained clearly.	There is an insightful discussion of the ethical aspects of the research area.

Discussion	The work is presented but not discussed, or the discussion is very patchy.	There is some discussion of the work beyond merely presenting it.	The related work is discussed, the key issues have been clearly explained, and the key subtopics of research have been presented.	The discussion of the related work is exceptionally clear. The reader has a clear picture of what has been achieved, what subtopics are current research, and what are the issues that will be hot topics for possible PhD projects in the near future.
Quality of writing	Very poor; problems with coherent presentation of ideas.	Understandable, but with some problems in grammar, style and spelling.	Grammar and style of an acceptable standard; could be safely given to an external party with only minor editing.	High quality prose; well written; could comfortably be published in an academic website.
Appropriate use of referencing conventions	The information in the bibliography is incomplete, or there is lack of consistency in formatting. There are also missing references and/or uncited references.	The information in the bibliography is incomplete, or there is lack of consistency in formatting.	The information in the bibliography is formatted consistently, but with a few missing details.	All references are complete and consistently formatted.

## Grading rubric for the first and second presentations

Criterion	Fail	Pass	Credit	Distinction and High Distinction
Presentation structure	Muddled and dis-organised; the structure of the presentation was not made clear via either signposting on the slides or explicit indications in the verbal presentation.	It was possible to determine that the presentation had a structure, but this was not made explicit on either the slides or in the verbal presentation.	The structure of the presentation was made clear via both the slides and verbal cues.	An exceptionally well-structured presentation; would serve as a great example for others to follow.
Communication of content	Unclear what was the problem, significance or state of the art in the chosen topic.	The problem, significance and state of the art were presented, it a little unclearly.	The presentation clearly indicated the problem, significance, state of the art.	An exceptionally good presentation. Besides a good review of the state of the art, it is clear where research in this area is heading and what would be desirable PhD topics in the area.
Visual aspects of the presentation	Slides not well-presented. Some combination of inappropriate content, inappropriate level of detail, and inconsistencies in formatting.	Slides contained the right level of detail, with perhaps a few lapses in quality.	Slides contained the right level of detail throughout, and were formatted neatly and consistently.	Exceptionally well-presented; could be used in an academic website or slide sharing site.
Speaking skills	Some combination of: non-adequately rehearsed; incoherent presentation; inaudible; almost entirely read off the slides; ran out of time.	Read off the slides some of the time, but the presentation was coherent and audible, and overall the verbal presentation added something to the material on the slides.	Obviously well-rehearsed. The verbal presentation was clear and precise, and complemented the slides rather than repeating their content.	Exceptionally polished presentation; the recording could be shared in an academic website.

Audience interaction	Didn't look at the audience; spent most of the time looking at the screen or elsewhere.	Looked at the audience throughout the presentation.	Scanned the audience throughout the presentation, watching for signs of misunderstanding or boredom; responded appropriately.	Actively interacted with the audience (via questions, a poll, a good joke, or some other means); made eye contact with most people in the audience.
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## Grading rubric for each post-seminar discussion & summary report

Note that this rubric includes a section that is related to the student participation in the discussions.

Criterion	Fail	Pass	Credit	Distinction and High Distinction
Communication of content in the summary report & discussion	It is completely unclear what was the problem, significance, methods or conclusions.	The problem, significance, methods and conclusions were summarized, but a little un-clearly.	The problem, significance, methods and conclusion, were clearly indicated	An exceptionally good report & discussion which provided further insights into the methods used and the results reported.
Quality of writing of the report	Very poor; problems with coherent presentation of ideas.	Understandable, but with some problems in grammar, style and spelling.	Grammar and style of an acceptable standard; could be safely given to an external party with only minor editing.	High quality prose; well written; could comfortably be published in an academic website.
Class participation	There were no questions or comments asked in the discussions, or the questions asked were not relevant.	There were relevant questions asked in some of the discussions.	There was interesting and useful engagement with the discussions delivered by staff and other students.	There was exceptional engagement with the discussions delivered by the other students which lead to further understanding of the methods and the results.

## Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Discussion sessions</u>	30%	No	Weeks 4, 6, 10
<u>Presentation 1</u>	10%	No	Week 8
<u>Final Report 1</u>	25%	No	Week 8
<u>Presentation 2</u>	10%	No	Week 13
<u>Final report 2</u>	25%	No	Week 13

## Discussion sessions

Assessment Type <sup>1</sup>: Summary

Indicative Time on Task <sup>2</sup>: 30 hours

Due: **Weeks 4, 6, 10**

Weighting: **30%**

After each staff seminar and in the following week there is going to be a discussion session in the class. The discussion will be based on summary reports, written by the students, of very recent papers on a topic relevant to each seminar. So, the students will submit three summary reports in total. Each summary report will be 1-2 pages long, and will be worth 5% with the remaining 5% coming from active participation in each discussion session.

On successful completion you will be able to:

- Summarize the state of art in selected disciplines of Computing
- Demonstrate an understanding of research being done in the Department of Computing
- Interpret and apply the principles of ethical conduct in selected disciplines of Computing

## Presentation 1

Assessment Type <sup>1</sup>: Presentation

Indicative Time on Task <sup>2</sup>: 10 hours

Due: **Week 8**

Weighting: **10%**

The presentation of the first report in the class. The presentation should be around 10 minutes long plus 5 minutes for question time.

On successful completion you will be able to:

- Summarize the state of art in selected disciplines of Computing
- Demonstrate an understanding of research being done in the Department of Computing
- Interpret and apply the principles of ethical conduct in selected disciplines of Computing
- Present a research topic orally

## Final Report 1

Assessment Type <sup>1</sup>: Report

Indicative Time on Task <sup>2</sup>: 25 hours

Due: **Week 8**

Weighting: **25%**

For a chosen topic, a student is required to submit a report of approximately 1500-2000 words

On successful completion you will be able to:

- Summarize the state of art in selected disciplines of Computing
- Demonstrate an understanding of research being done in the Department of Computing
- Interpret and apply the principles of ethical conduct in selected disciplines of Computing
- Write a critical overview of a research topic

## Presentation 2

Assessment Type <sup>1</sup>: Presentation

Indicative Time on Task <sup>2</sup>: 10 hours

Due: **Week 13**

Weighting: **10%**

The presentation of the second report in the class. The presentation should be around 10 minutes long plus 5 minutes for question time.

On successful completion you will be able to:

- Summarize the state of art in selected disciplines of Computing
- Demonstrate an understanding of research being done in the Department of Computing
- Interpret and apply the principles of ethical conduct in selected disciplines of Computing
- Present a research topic orally

## Final report 2

Assessment Type <sup>1</sup>: Report

Indicative Time on Task <sup>2</sup>: 25 hours

Due: **Week 13**

Weighting: **25%**

For a chosen topic, a student is required to submit a report of approximately 1500-2000 words

On successful completion you will be able to:

- Summarize the state of art in selected disciplines of Computing
- Demonstrate an understanding of research being done in the Department of Computing
- Interpret and apply the principles of ethical conduct in selected disciplines of Computing
- Write a critical overview of a research topic

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<sup>1</sup> If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the [Writing Centre](#) for academic skills support.

<sup>2</sup> Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

## Delivery and Resources

### CLASSES

***Classes will be held online on Mondays, 1-3pm - see iLearn for further details.***

In the classes, we will have several different types of activities:

- **Seminars** -- the unit basic component is a collection of three seminars. Each seminar is given by an academic with international research standing. The seminars are going to present both the state of art and recent developments in the three selected research areas of Computing. They will also introduce the relevant research groups and areas in the Department.
- **Final Reports and Presentations** -- there will be two final reports and two presentations based on the two final reports by the students. The first final report has to discuss a topic chosen from Seminars 1 and 2. The second final report has to discuss a different topic chosen from Seminars 1 to 3. The reports are going to be presented at two presentation sessions.
- **Discussion Sessions** -- in the week after each seminar, there will be a discussion session, based on the summary reports of a chosen paper from the seminar.
- **Regular Sessions** -- the unit may also include sessions and/or independent reading on how to manage time, write scientific reports and how to present research results.

### UNIT WEBPAGE AND TECHNOLOGY USED AND REQUIRED

- **iLearn** is going to be used as a main web server for the unit.

## Unit Schedule

The following schedule is tentative. Please consult iLearn for any possible updates.

Week	Topic	Lecturer
Week 1	Welcome and Introduction	Mehmet Orgun
Week 2	Doing Postgraduate Research	Mehmet Orgun
Week 3	Seminar 1	TBA
Week 4	Discussion Session 1	Mehmet Orgun
Week 5	Seminar 2	TBA
Week 6	Discussion Session 2	Mehmet Orgun
	2-Week Recess	

Week 7	How to give presentations	Mehmet Orgun
Week 8	Presentations of the first final reports	Mehmet Orgun
Week 9	Seminar 3	TBA
Week 10	Discussion Session 3	Mehmet Orgun
Week 11	Independent reading	Mehmet Orgun
Week 12	Open discussion	Mehmet Orgun
Week 13	Presentations of the second final reports	Mehmet Orgun

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://policies.mq.edu.au\)](https://policies.mq.edu.au). 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](#)

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

To find other policies relating to Teaching and Learning, visit [Policy Central \(https://policies.mq.edu.au\)](https://policies.mq.edu.au) and use the [search tool](#).

## Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/admin/other-resources/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](https://ask.mq.edu.au) or if you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto: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](http://mq.edu.au/learningskills)) provides academic writing resources and study strategies to help you improve your marks and take control of your study.

- [Getting help with your assignment](#)
- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module](#)

The Library provides online and face to face support to help you find and use relevant information resources.

- [Subject and Research Guides](#)
- [Ask a Librarian](#)

## Student Services and 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.

## Student Enquiries

For all student enquiries, visit Student Connect at [ask.mq.edu.au](http://ask.mq.edu.au)

If you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto:globalmba.support@mq.edu.au)

## IT Help

For help with University computer systems and technology, visit [http://www.mq.edu.au/about\\_us/offices\\_and\\_units/information\\_technology/help/](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.

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Unit information based on version 2021.02 of the [Handbook](#)