



# COMP2110

## Web Technology

Session 1, Special circumstances 2021

*Department of Computing*

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#### **Disclaimer**

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#### **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

Convener, Lecturer

Zhu Sun

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Lecturer

Kate Stefanov

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### Credit points

10

### Prerequisites

(COMP1010 or COMP125) and (COMP1350 or ISYS114)

### Corequisites

### Co-badged status

### Unit description

This unit covers a range of techniques and concepts that are relevant to implementing systems on the world wide web. From web site development using HTML and CSS, through to complete client-server applications, the unit explores the full spectrum of this technology, providing insight into the standards underlying the web and the programming techniques used to exploit these standards to build web applications.

## 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:

**ULO1:** Use your knowledge of the underlying technologies of the web to communicate in detail how web applications work

**ULO2:** Critique web design and apply good design principles to develop accessible web applications.

**ULO3:** Design and develop a data driven web application using modern web technologies.

**ULO4:** Demonstrate knowledge of ethical and legal issues relating to web applications

**ULO5:** Use automated and other tests to ensure that implementations match client and accessibility requirements.

## General Assessment Information

### Workshop Hurdle

The workshop is a hurdle requirement, you must get 8 out of the possible 10 marks to pass the hurdle but you will have a total of 12 weeks where you could attend - hence you can miss at most four weeks of workshop tasks.

### Late Submission

No extensions will be granted without an approved application for Special Consideration. There will be a deduction of 10% 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 – 20% penalty or 2 marks deducted from the total. No submission will be accepted after solutions have been posted.

## Assessment Tasks

Name	Weighting	Hurdle	Due
<a href="#">Weekly Tasks</a>	10%	Yes	Weekly
<a href="#">Web Design</a>	5%	No	Week 4
<a href="#">Web Application</a>	35%	No	Week 8
<a href="#">Legal &amp; Ethical Report</a>	10%	No	Week 12
<a href="#">Exam</a>	40%	No	Exam Period

### Weekly Tasks

Assessment Type <sup>1</sup>: Participatory task

Indicative Time on Task <sup>2</sup>: 0 hours

Due: **Weekly**

Weighting: **10%**

**This is a hurdle assessment task (see [assessment policy](#) for more information on hurdle assessment tasks)**

Each week there will be a task set as part of the weekly workshop that you will need to complete. This may involve submission of some code, an online activity or a quiz. Each week will be worth

1 mark up to a total of 10.

On successful completion you will be able to:

- Use your knowledge of the underlying technologies of the web to communicate in detail how web applications work
- Critique web design and apply good design principles to develop accessible web applications.
- Design and develop a data driven web application using modern web technologies.
- Demonstrate knowledge of ethical and legal issues relating to web applications

## Web Design

Assessment Type <sup>1</sup>: Design Task

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

Due: **Week 4**

Weighting: **5%**

This is a design task using CSS. You will be asked to write a CSS stylesheet for a sample web page. The results will be peer-marked - you will be given the chance to see the work of other students and provide marks and feedback. The final mark will be based on marks given by your peers.

On successful completion you will be able to:

- Use your knowledge of the underlying technologies of the web to communicate in detail how web applications work
- Critique web design and apply good design principles to develop accessible web applications.
- Design and develop a data driven web application using modern web technologies.

## Web Application

Assessment Type <sup>1</sup>: Programming Task

Indicative Time on Task <sup>2</sup>: 42 hours

Due: **Week 8**

Weighting: **35%**

This is a programming task. You will develop a web application that makes use of a data store. You will be provided with a set of tests that your code must pass as well as a set of functional

requirements for the application.

On successful completion you will be able to:

- Use your knowledge of the underlying technologies of the web to communicate in detail how web applications work
- Critique web design and apply good design principles to develop accessible web applications.
- Design and develop a data driven web application using modern web technologies.
- Use automated and other tests to ensure that implementations match client and accessibility requirements.

## Legal & Ethical Report

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

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

Due: **Week 12**

Weighting: **10%**

You will write a report on the legal and ethical aspect of web design and development. This will involve you researching the topic to find sources of information and using them to develop your report. You will be provided with pointers to resources but will be expected to find more based on your own research.

On successful completion you will be able to:

- Use your knowledge of the underlying technologies of the web to communicate in detail how web applications work

## Exam

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

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

Due: **Exam Period**

Weighting: **40%**

The final exam will assess your ability to describe and explain the technologies we have covered in the unit. It will cover all of the material in the unit.

On successful completion you will be able to:

- Use your knowledge of the underlying technologies of the web to communicate in detail how web applications work
- Critique web design and apply good design principles to develop accessible web applications.

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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 [Learning Skills Unit](#) 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

COMP2110 is taught mainly through online notes and video presentations with a one hour lecture. Each week a number of video presentations will be made available on iLearn, you should watch these and follow up on the topics covered before the lecture. The lecture will recap some of the video content and provide a forum for discussion of the topics of the week, as well as preview the video content in the following week.

You will also have a two-hour workshop each week in the computer laboratory. This will be used as a combined tutorial and practical class, with tasks each week to engage you in the topics we are discussing. The workshops give you a chance to talk over any problems with your tutor. There will be a checkpoint task each week for you to complete in the workshop, you must do this in the workshop and show your tutor the result.

Since your tutor will be keeping track of your marks, you should attend the workshop that you enroll in. If you do need to change, make sure your tutor and the tutor in the new class agree.

### Required Texts

There is no required text for COMP2110. We have written a set of notes for the unit which will be added to through the semester. You can find them here:

- [Practical Web Programming](#)

We will also provide notes, slides and links to other resources each week. It is important that you follow up links provided with the video presentations and in the notes on each topic.

## Required Technology

We will use Visual Studio Code as the recommended development environment although you are free to use your own favourite editor if you wish. You will be making use of a number of different web browsers (Firefox, Internet Explorer, Chrome, Safari, Opera...) to test web pages. All of this software will run on Windows, Mac or Linux. [Strapi](#) will be introduced as a more robust server-side package in the unit. It implements a backend JSON server that can be used to serve data to a front-end Javascript application.

## Unit Schedule

The schedule below is the planned topic list for the unit but minor changes may be made in response to student feedback or other factors. See the iLearn unit page for the definitive and more detailed week by week breakdown.

Week	Topic	Assessment
1	Core Web Technology	
2	HTML and CSS	
3	Introduction to Javascript	
4	Single Page Web Application	Web Design
5	Web Servers and Services, Forms	
6	Building Server Side	
Break		
7	Elements of Design	
8	Cookies and Sessions	Web Application
9	Usability and Accessibility	
10	Mobile Web Application	
11	Full Stack	
12	Security on the Web	Legal & Ethics Report
13	Review	

## 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](http://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 Enquiry Service

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)

## 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/](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 from Previous Offering

The main change is to introduce a more robust server-side package in the unit. Last year we just had a Python-based server and did not really emphasize the server-side much. Therefore, this time we aim to adopt one 'headless CMS' package - [Strapi](#) as a more robust server-side package. It implements a backend JSON server that can be used to serve data to a front-end Javascript application. The advantage is that it's a commercial package that could be used for real-world web development, so the students will have a realistic view of how to develop a web application.