COMP6110
Web Technology
Session 1, Weekday attendance, North Ryde 2020
Dept of Computing

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https://unitguides.mq.edu.au/unit_offerings/122875/unit_guide/print
General Information

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Credit points
10

Prerequisites

Corequisites

Co-badged status
COMP2110

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 HyperText Markup Language (HTML) and eXtensible Markup Language (XML), 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

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

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

<table>
<thead>
<tr>
<th>Name</th>
<th>Weighting</th>
<th>Hurdle</th>
<th>Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web Design</td>
<td>5%</td>
<td>No</td>
<td>Week 5</td>
</tr>
<tr>
<td>Workshop Tasks</td>
<td>10%</td>
<td>No</td>
<td>Weekly</td>
</tr>
<tr>
<td>Web Application</td>
<td>35%</td>
<td>No</td>
<td>Week 10</td>
</tr>
<tr>
<td>Legal &amp; Ethical Report</td>
<td>10%</td>
<td>No</td>
<td>Week 12</td>
</tr>
<tr>
<td>Exam</td>
<td>40%</td>
<td>No</td>
<td>Exam Period</td>
</tr>
</tbody>
</table>

Web Design

Assessment Type: Design Task

Indicative Time on Task: 10 hours

Due: Week 5

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.

Workshop Tasks
Assessment Type 1: Participatory task
Indicative Time on Task 2: 0 hours
Due: Weekly
Weighting: 10%

Each week there will be a task set during the practical workshop that you will need to complete. You will need to attend the workshop to complete this task and show your work to your tutor. 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
• Use automated and other tests to ensure that implementations match client and accessibility requirements.

Web Application
Assessment Type 1: Programming Task
Indicative Time on Task 2: 42 hours
Due: Week 10
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: Report
Indicative Time on Task: 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

• Demonstrate knowledge of ethical and legal issues relating to web applications

Exam

Assessment Type: Examination
Indicative Time on Task: 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 be a closed book exam covering 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.

• Demonstrate knowledge of ethical and legal issues relating to web applications

1 If you need guidance or support to understand or complete this type of assessment, please contact the Learning Skills Team

2 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

COMP6110 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.

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 COMP6110. 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

You will be writing server side programs in **Python 3.6**. 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.

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.

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Core Web Technology</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>HTML and CSS</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Elements of Design</td>
<td></td>
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<tr>
<td>4</td>
<td>Introducing Javascript</td>
<td></td>
</tr>
</tbody>
</table>
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](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](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/](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 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](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**

This offering changes emphasis from back-end development using Python to front-end development with Javascript. We still include mention of both but the balance has been flipped.
The reason for this is that learning two new languages and environments was too much for one unit. Javascript on the front-end is the most common architecture for modern web applications. Some Python is maintained to allow us to discuss the role of the server side application in web architecture.

New material has been introduced on design, usability and accessibility.