

Unit Outline

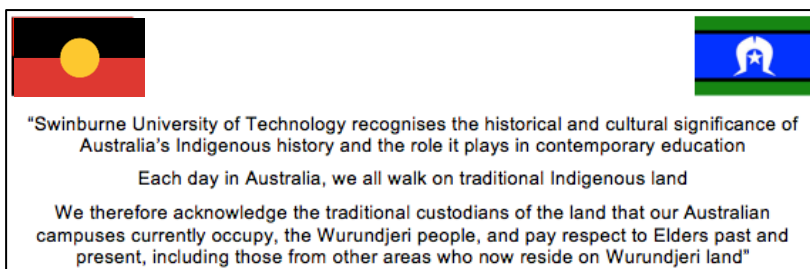
COS60004

Creating Web Applications

Semester 1 2024

Please read this Unit Outline carefully. It includes:

- PART A** Unit summary
- PART B** Your Unit in more detail
- PART C** Further information



PART A: Unit Summary

Unit Code(s)	COS60004
Unit Title	Creating Web Applications
Duration	One semester
Total Contact Hours	4 hours / week
Requisites:	
Pre-requisite	INF60008 Introduction to Programming in .NET
Concurrent Pre-requisite	TNE60003 Introduction to Network Programming or COS60006 Introduction to Programming or COS60010 Technology Enquiry Project
Anti-requisite	COS60002 Web Development
Assumed knowledge	Basic familiarity with any procedural programming language.
Credit Points	12.5
Campus/Location	Hawthorn
Mode of Delivery	Lecture, Tutorial
Assessment Summary	Lab exercises, Assignments.

Aims

This unit introduces the technology of the World Wide Web and concepts of Client-Server computing. Students will develop dynamic, data-driven web sites using a both client and server-side programming languages.

Unit Learning Outcomes

Upon completion of this unit student will be able to:

1. Describe the role of networking in the context of web including tools to configure web clients and servers
2. Demonstrate the use of mark up and presentation languages in creating web pages
3. Demonstrate the use of server scripting and database access to create data driven webpages
4. Describe the interaction between components of a web application, and comment on issues related to privacy, security, and commercial and social issues
5. Conduct a comparative analysis of contemporary approaches to developing Internet applications, their purpose, internal architectures, and related issues

Key Generic Skills

You will be provided with feedback on your progress in attaining the following generic skills:

- analysis skills,
- problem solving skills,
- ability to tackle unfamiliar problems, and
- ability to work independently

Content

- Overview of the Internet and the World Wide Web.
- Clients and servers on the Web.
- Developing web sites with HTML, CSS, JavaScript, XML, DOM, PHP and MySQL.
- Validating HTML and CSS against accepted standards.
- Creating Web pages with client and server-side interactivity.
- Application of accessibility and usability principles.

PART B: Your Unit in more detail

Unit Teaching Staff

Name	Role	Email	Consultation Times
Dr Armita Zarnegar	Convenor	azarnegar@swin.edu.au	By email appointment
Dr Bo Li	Lecturer, Tutor	boli@swin.edu.au	By email appointment
Zeqian Dong	Tutor	zdong@swin.edu.au	By email appointment
Jeff Dunn	Tutor	jmdunn@swin.edu.au	By email appointment
Mostafa Farshchi	Tutor	mostafafarshchi@swin.edu.au	By email appointment

Learning and Teaching Structure

Category	Activity	Total Hours	Hours per Week	Teaching Period Weeks
Live online	Lectures	24 hours	2 hours	Weeks 1 to 12
In person	Tutorials / Labs	24 hours	2 hours	Weeks 1 to 12

Provisional Schedule

Wk	Begin	Lecture	Tutorial	Assessment
1	Feb 26	<ul style="list-style-type: none"> HTML Part 1 	<ul style="list-style-type: none"> Lab 01 - Using Mercury, Creating an HTML page, HTML validation 	<ul style="list-style-type: none"> Lab Work
2	Mar 4	HTML Part 2	<ul style="list-style-type: none"> Lab 02 - HTML Structure, Forms, Data validation using HTML5 	<ul style="list-style-type: none"> Lab Work Assignment Part 1 released on Canvas
3	Mar 11	<ul style="list-style-type: none"> Usability CSS Part 1 	<ul style="list-style-type: none"> Lab 03 - Page layout using CSS, Typography formatting 	<ul style="list-style-type: none"> Lab Work
4	Mar 18	<ul style="list-style-type: none"> CSS Part 2 	<ul style="list-style-type: none"> Lab 04 - CSS Layout 	<ul style="list-style-type: none"> Lab Work
5	Mar 25	<ul style="list-style-type: none"> JavaScript Part 1 	<ul style="list-style-type: none"> Demonstration of Assignment Part 1 	<ul style="list-style-type: none"> Assignment Part 1 due on Canvas and Mercury Assignment Part 2 released on Canvas
<div>Mar 28 – Apr 3</div> <div>Mid-Semester break</div>				
6	Apr 8	<ul style="list-style-type: none"> JavaScript Part 2 	<ul style="list-style-type: none"> Lab 05 - JavaScript Basics, Reading and writing to a Web page, Syntax Debugging 	<ul style="list-style-type: none"> Lab Work
7	Apr 15	<ul style="list-style-type: none"> JavaScript Part 3 	<ul style="list-style-type: none"> Lab 06 - Checking user from data with JS, Client-side storage, Logic Debugging 	<ul style="list-style-type: none"> Lab Work
8	Apr 22	<ul style="list-style-type: none"> PHP: Part 1 	<ul style="list-style-type: none"> Lab 07 - PHP Basics, HTTP headers Demonstration of Assignment Part 2 	<ul style="list-style-type: none"> Assignment Part 2 due on Canvas and Mercury Assignment Part 3 released on Canvas Lab Work
9	Apr 29	<ul style="list-style-type: none"> PHP: Part 2 	<ul style="list-style-type: none"> Lab 08 - PHP and Forms 	<ul style="list-style-type: none"> Lab Work
10	May 6	<ul style="list-style-type: none"> PHP and MYSQL Part 1 	<ul style="list-style-type: none"> Lab 09 - PHP and MySQL 	<ul style="list-style-type: none"> Lab Work
11	May 13	<ul style="list-style-type: none"> PHP and MYSQL Part 2 	<ul style="list-style-type: none"> Lab 10 - Managing State and SQL Injection 	<ul style="list-style-type: none"> Lab Work
12	May 20	<ul style="list-style-type: none"> Web security Recent trends 	<ul style="list-style-type: none"> Demonstration of Assignment Part 3 	<ul style="list-style-type: none"> Assignment Part 3 due on Canvas and Mercury

Assessment

a) Assessment Overview

Assessment Task	Individual/ Group Task	Learning Objective(s)	Weighting	Due Date
Lab exercises	Individual	1-4	10%	Weekly
Assignment Part 1	Individual	2	20%	Week 5 on Monday
Assignment Part 2	Individual	2,3	30%	Week 8 on Monday
Assignment Part 3	Individual	2,3,4,5	40%	Week 12 on Monday

Lab exercises: each lab exercise will be marked off before the next tutorial commences. You are encouraged to complete the lab exercises before your tutorial so that you have time to discuss any issues with your tutor.

Assignment Parts 1, 2 and 3: are incremental instalments of a web site development task. In Part 1, you will demonstrate your ability to develop and deploy on a web server a well-structured, linked web pages with text, graphics, tables and forms, styled with CSS. Part 2 further extends the use of HTML elements and makes use of JavaScript to validate forms and add dynamic behaviours to the web pages. In Part 3, you will use forms to submit and retrieve data from a web server using PHP and MySQL, and analyse the accessibility of your website.

b) Minimum requirements to pass this unit

As the minimum requirements of assessment to pass a unit and meet all Unit Learning Outcomes to a minimum standard, a student must achieve:

- achieve an overall mark for the unit of 50% or more.

c) Final Examinations

There is no examination for this unit.

d) Use of generative AI (genAI) in this Unit

The valid use of genAI in this unit is only for brainstorming and generating ideas for improving work. Any use of genAI must be acknowledged, with prompts and/or outputs included in an appendix.

e) Submission Requirements

- Unless specified otherwise, assignments are submitted 1) to the Mercury server; and 2) online through the Canvas assessment submission system which integrates with the Turnitin plagiarism checking service. Please refer to the assignment specification for details.
- Please ensure you keep a copy of the submitted assessments.

f) Extensions and Late Submission

- Extensions will only be granted in exceptional circumstances on medical or compassionate grounds. Extensions **MUST** be applied for in advance of the assignment's due date.
- Late Submissions - Unless an extension has been approved, late submissions will result in a penalty. **You will be penalised 10% of the assessment's worth for each calendar day the task is late, up to a maximum of 5 days. After 5 calendar days, a zero result will be recorded.**
- Feedback or comments from the marker will generally not be available on assignments which are submitted after five working days past the published deadline.

g) Referencing

- To avoid plagiarism, you are required to provide a reference whenever you include information from other sources in your work. Further details regarding plagiarism are available in Section C of this document.
- References may appear in the code or on the web page as appropriate.
- Helpful information on referencing can be found at <http://www.swinburne.edu.au/lib/studyhelp/harvard-quick-guide.pdf>

h) Groupwork Guidelines

Not applicable. All assessments in this unit are individual.

Recent Unit Improvements

Due to changing industry practice and feedback from students, HTML is no longer required to be strictly XML compliant.

Required Textbook(s)

Nil

Recommended Reading Materials

There is no prescribed text for this subject. The Library has a large collection of resource materials, both texts and current journals. It is also recommended that you explore other sources to broaden your understanding.

PART C: FURTHER INFORMATION



For further information on any of the below topics, refer to Swinburne's Current Students web page <http://www.swinburne.edu.au/student/>.

Student Charter

Please familiarise yourself with Swinburne's Student Charter. The charter describes what students can reasonably expect from Swinburne in order to enjoy a quality learning experience. As students contribute to their own learning experience to that of their fellow students, the charter also defines the University's expectations of students.

Student behaviour and wellbeing

Swinburne has a range of policies and procedures that govern how students are expected to conduct themselves throughout the course of their relationship with the University. These include policies on expected standards of behaviour and conduct which cover interaction with fellow students, staff and the wider University community, in addition to following the health and safety requirements in the course of their studies and whilst using University facilities.

All students are expected to familiarise themselves with University regulations, policies and procedures and have an obligation to abide by the expected guidelines. Any student found to be in breach may be subject to relevant disciplinary processes. Some examples of relevant expected behaviours are:

- Not engaging in student misconduct
- Ensuring compliance with the University's Anti-Discrimination, Bullying and Violence and Sexual Harassment requirements
- Complying with all Swinburne occupational health and safety requirements, including following emergency and evacuation procedures and following instructions given by staff/wardens or emergency response.

In teaching areas, it is expected that students conduct themselves in a manner that is professional and not disruptive to others. In all Swinburne laboratories, there are specific safety procedures which must be followed, such as wearing appropriate footwear and safety equipment, not acting in a manner which is dangerous or disruptive (e.g. playing computer games), and not bringing in food or drink.

Canvas

You should regularly access the Swinburne learning management system, Canvas, which is available via the Current Students webpage or <https://swinburne.instructure.com/>. Canvas is updated regularly with important unit information and communications.

Communication

All communication will be via your Swinburne email address. If you access your email through a provider other than Swinburne, then it is your responsibility to ensure that your Swinburne email is redirected to your private email address.

Plagiarism

Plagiarism is the action or practice of taking and submitting or presenting the thoughts, writings or other work of someone else as though it is your own work. Plagiarism includes any of the following, without full and appropriate acknowledgment to the original source(s):

- The use of the whole or part of a computer program written by another person;
- the use, in essays or other assessable work, of the whole or part of a written work from any source including but not limited to a book, journal, newspaper article, set of lecture notes, current or past student's work, any other person's work, a website or database;
- The paraphrasing of another's work;
- The use of musical composition, audio, visual, graphic and photographic models,
- The use of realia that is objects, artefacts, costumes, models and the like.
- Plagiarism includes the submission of assessments that have been developed by another person or service through contract, tender or online writing services.

- Plagiarism also includes the preparation or production and submission or presentation of assignments or other work in conjunction with another person or other people when that work should be your own independent work. This remains plagiarism whether or not it is with the knowledge or consent of the other person or people. It should be noted that Swinburne encourages its students to talk to staff, fellow students and other people who may be able to contribute to a student's academic work but that where independent assignment is required, submitted or presented work must be the student's own.

Enabling plagiarism contributes to plagiarism and therefore will be treated as a form of plagiarism by the University. Enabling plagiarism means allowing or otherwise assisting another student to copy or otherwise plagiarise work by, for example, allowing access to a draft or completed assignment or other work.

Swinburne University use the Turnitin system that helps check for improper citations or potential plagiarism in assignments submitted electronically via Canvas. Your Unit Convenor will provide further details.

The penalties for plagiarism can be severe, ranging from a zero grade for an assessment task through to expulsion from the unit and, in the extreme, exclusion from Swinburne. Consequently, you need to avoid plagiarism by providing a reference whenever you include information from other sources in your work.

Student support

You should talk to your Unit Convenor or Student Services for information on academic support services available for Swinburne students.

Special consideration

If your studies have been adversely affected due to serious and unavoidable circumstances outside of your control (e.g. severe illness or unavoidable obligation), you may be able to apply for special consideration (SPC).

Applications for Special Consideration will be submitted via the SPC online tool normally no later than 5.00pm on the third working day after the submission/sitting date for the relevant assessment component.

Accessibility needs

Sometimes students with a disability, a mental health or medical condition or significant carer responsibilities require reasonable adjustments to enable full access to and participation in education. Your needs can be addressed by Swinburne's AccessAbility Services by negotiating and distributing an 'Education Access Plan'. The plan makes recommendations to university teaching and examination staff. You must notify AccessAbility Services of your disability or condition within one week after the commencement of your unit to allow the University to make reasonable adjustments.

Review of marks

An independent marker reviews all fail grades for major assessment tasks. In addition, a review of assessment is undertaken if your final result is between 45 and 49 or within 2 marks of any grade threshold.

If you are not satisfied with the result of an assessment, you can ask the Unit Convenor to review the result. Your request must be made in writing within 10 working days of receiving the result. The Unit Convenor will review your result to determine if your result is appropriate.

If you are dissatisfied with the outcomes of the review, you can lodge a formal complaint.

Feedback, complaints and suggestions

In the first instance, you may discuss any issues with your Unit Convenor. If you are dissatisfied with the outcome of the discussions with the Unit Convenor or would prefer not to deal with your Unit Convenor, then you can complete a feedback form.

Advocacy

Should you require assistance with any academic issues, University statutes, regulations, policies and procedures, you are advised to seek advice from an Independent Advocacy Officer at Swinburne Student Life (previously Swinburne Student Amenities Association (SSAA)).

For an appointment, please call 03 9214 5445 or email advocacy@swin.edu.au

For more information, please see <https://www.swinburne.edu.au/current-students/student-services-support/advocacy/>