SCIT

School of Computing and Information Technology
Faculty of Engineering & Information Sciences

SIM Session 1, 2026
Subject Outline
ISIT307 Web Server Programming

Subject Organisation

Subject Coordinator/Lecturer:	Dr. Elena Vlahu-Gjorgievska
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Credit Points:	6 credit points
Duration:	1 session
Lecture Times & Location:	Refer to SIMConnect

The University uses the eLearning system Moodle to support all coursework subjects.

Students should check the subject's Moodle site regularly as important information, including **details of unavoidable changes in assessment requirements will be posted from time to http://www.uow.edu.au/student/**. Any information posted to the web site is deemed to have been notified to all students.

In extraordinary circumstances the provisions stipulated in this Subject Outline may require amendment after the Subject Outline has been distributed. All students enrolled in the subject must be notified and have the opportunity to provide feedback in relation to the proposed amendment, prior to the amendment being finalised.

Data on student performance and engagement (such as Moodle and University Library usage, task marks, use of SOLS) will be available to the Subject Coordinator to assist in analysing student engagement, and to identify and recommend support to students who may be at risk of failure. If you have questions about the kinds of data the University uses, how we collect it, and how we protect your privacy in the use of this data, please refer to http://www.uow.edu.au/dvca/bala/analytics/index.html

Subject Description

The subject aims to integrate the previous knowledge which students have gained through subjects on web technologies, web programming and databases to create real-world web applications like shopping carts or advanced form processing systems etc. It also introduces students to open-source programming languages in web development so that they can inexpensively develop sophisticated web applications. Students will become familiar with the integration of programming, databases, web-applications, and structural and object oriented programming.

Subject Learning Outcomes

On successful completion of this subject, students will be able to:

1. Define and describe object-oriented programming concepts in web programming.

2. Use an open source program to develop web applications.

3. Integrate databases, client-side scripts, and server-side scripts to develop efficient web programs such as a shopping-cart application.

4. Use data structures like trees, graphs and networks to provide solutions to problems with moderate complexity in general and parsing XML documents in particular.

5. Write maintainable electronic business applications with moderate complexity using an array of web development skills like DHTML, server-side scripts, client-side scripts, database integration, cookies, and session variables.

Recent Improvements

The School is committed to continual improvement in teaching and learning and takes into consideration student feedback from many sources. These sources include direct student feedback to tutors and lecturers, feedback through Student Services and the Faculty Central, and responses to the Subject Evaluation Surveys. This information is also used to inform comprehensive reviews of subjects and courses.

Attendance Requirements

It is the responsibility of students to attend all lectures/tutorials/labs/seminars/practical work for subjects for which you are enrolled.

Satisfactory attendance is deemed by the University, to be attendance at approximately 80% of the allocated contact hours.

Using Generative Artificial Intelligence (GenAI)

GenAI technology (such as ChatGPT or Microsoft Co-pilot) is reshaping the University experience worldwide. UOW is committed to embracing GenAI as a tool to enhance learning experiences and develop vital work-readiness skills. However, misuse or use of GenAI in assessments where prohibited constitutes academic misconduct (as specified by University Policy).

It is important that students check if GenAI is permitted for each assessment task and how it is to be used and acknowledged. Please read the student guidance available on how to use GenAI ethically and critically, equally recognising its capabilities and limitations. For example:

1. **Generative AI is not a substitute for decision-making**: GenAI should complement, not replace, your critical thinking and decision-making skills.

2. **Output quality depends on prompts**: The quality of GenAI outputs is influenced by prompting. Poorly constructed or unclear prompts may generate outputs that are incorrect.

3. **Fact verification is essential**: GenAI outputs can be fabricated, presenting inaccurate information or contain harmful bias. Verify all GenAI outputs against reliable sources.

4. **Protect data and copyright**: Many GenAI technologies collect information in ways that breach privacy and data protection provisions, particularly where the source material is confidential or subject to copyright. Please check the Terms and Conditions of GenAI technologies and if unsure, contact UOW Copyright Guidance.

5. **Transparency in use**: Where required, you must acknowledge GenAI use, including providing prompt histories and detailing how GenAI was utilised.

6. **Thoughtful and appropriate application**: Be mindful of when and how to use GenAI tools. Assess its appropriateness for each use, and refrain from use when not suitable.

If you have any questions, please contact your Subject Coordinator.

Method of Presentation

The subject will be presented as a series of lectures and tutorials.

Students must be aware that they are responsible for their own learning. Students must prepare adequately for lectures and tutorials in order to properly digest the material presented in those forms. Students are expected to undertake private study in order to fully understand and integrate all the material covered in this unit.

Lecture Schedule

The lecture schedule is subject to change.

	Topic	Reading
1	Introduction, PHP: Functions and Control Structures	lecture notes, other readings/resources
2	PHP: Manipulating Strings, PHP: Processing User Input	lecture notes, other readings/resources
3	PHP: Working with Files and Directories	lecture notes, other readings/resources

4	PHP: Arrays	lecture notes, other readings/resources
5	PHP: Object-Oriented programming (part 1) PHP: Working with databases	lecture notes, other readings/resources
6	PHP: Managing State Information PHP: Object-Oriented programming (part 2)	lecture notes, other readings/resources
7	PHP XML, PHP Ajax, Data structures and recursion in PHP, Subject Review	lecture notes, other readings/resources, W3Schools, php.net

Subject Material

Any readings/references are recommended only and are not intended to be an exhaustive list. Students are encouraged to use the library catalogue and databases to locate additional readings.

Textbooks

Other Resources

1. Sommerfeld, R 2024, *Unlock PHP 8: From Basic to Advanced: The next-level PHP 8 guide for dynamic web development (English Edition)*, BPB Publications, London.
2. Gosselin, D., Kokoska, D. and Easterbrooks, R., 2011. *PHP Programming with MySQL: The Web Technologies Series (2nd edition)*. Cengage Learning.
3. White III, E. and Eisenhamer, J.D., 2007. *PHP 5 in Practice*. Pearson Education. (Available in UOW Library as ebook)
4. Nixon, R., 2015. *Learning PHP, MySQL, and JavaScript: A Step-By-Step Guide to Creating Dynamic Websites (Animal Guide)*. O'Reilly. (Available in UOW Library as ebook)
5. Connolly, R., 2015. *Fundamentals of web development*. Pearson Education. (Available in UOW Library as ebook)
6. Rahman, M., 2017. *PHP 7 Data Structures and Algorithms*. Packt Publishing Ltd.
7. Nixon, R., 2021. Learning PHP, MySQL & JavaScript. O'Reilly Media
8. http://www.w3schools.com
9. http://php.net/

Assessment

This subject has the following assessment components.

ASSESSMENT ITEMS & FORMAT	% OF FINAL MARK	GROUP/ INDIVIDUAL	DUE DATE	SUBJECT LEARNING OUTCOMES	CRITERIA TO ASSESS ITEM
Assignment 1 (problem solution, presentation and online quiz)	25%	group		2,3,5	Correctness, completeness, consistency with a specification and demonstrated knowledge
Assignment 2 (problem solution, presentation and online quiz)	25%	Individual		1-3,5	Correctness, completeness, consistency with a specification and demonstrated knowledge
Final Examination	50%	Individual	During Exam Period	1, 3-5	Demonstrated knowledge and understanding of the subject material

Notes on Assessment

Assignment 1 is expected to be completed in workgroups of 2 students. Assignment 2 is expected to be completed independently. For the two assignments, the students should submit the project solution in Moodle, present the solution to the tutor during allocated timeslots in tutorials and individually complete the online quiz in Moodle. Plagiarism may result in a FAIL grade being recorded for that assignment.

Method of Submission of Assessment Items

Assignments are to be submitted via Moodle. Additionally, the students need to present the solution to the tutor during the next tutorial and complete the online quiz in Moodle.

Arrangement for acknowledging submission of written work

Acknowledgement of submission will occur electronically through Moodle.

Procedure for the return of assessment items

Assessment of assignments will be done electronically in Moodle.

Procedure for the retention of assessed work

The University may retain copies of student work in order to facilitate quality assurance of assessment processes, in support of the continuous improvement of assessment design, assessment marking and for the review of the subject. The University retains records of students' academic work in accordance with the University Records Management Policy and the State Records Act 1988 and uses these records in accordance with the University Privacy Policy and the Privacy and Personal Information Protection Act 1998.

Assessment General

Submission of assessment items via email will not be accepted.

Student contributions to tutorial and/or seminars

Not applicable.

Assessment task is set up to be checked by Turnitin

This subject does not use Turnitin.

Assessment Quality Cycle

The University of Wollongong is committed to the quality assurance and quality enhancement of assessment. The University will meet its legislative and regulatory obligations, to ensure consistent and appropriate assessment through course management and coordination, including assessment quality assurance procedures. An Assessment Quality Cycle is used to describe quality assurance at the points of assessment design, assessment delivery, the declaration of marks and grades, and review and improvement activities.

Referencing System

The type of referencing system to be used for written work is as follows:

- the Author-Date (Harvard) referencing system is the University's default referencing system to be used in the absence of a documented faculty/school preferred referencing style. Refer to the Library Referencing and Citing link: https://www.uow.edu.au/student/learningcoop/referencingciting/index.html

Internet Resources

There are no restrictions on using Internet resources.

Technical Fail

To be eligible for a Pass in this subject a student must achieve a mark of at least 40% in the Final Examination. Students who fail to achieve this minimum mark & would have otherwise passed may be given a TF (Technical Fail) for this subject.

Penalties for late submission of assessment items

Penalties apply to all late work, except if student academic consideration has been granted. Late submissions will attract a penalty of 5% of the assessment mark. This amount is per day including public holidays and weekends. Work more than 4 days late will be awarded a mark of zero.

UOW Grade Descriptors

GRADE	DESCRIPTOR
High Distinction(HD) 85-100%	For performance that provides evidence of an outstanding level of attainment of the relevant subject learning outcomes, demonstrating the attributes of a distinction grade plus (as applicable) one or more of the following: • consistent evidence of deep and critical understanding • substantial originality and insight in identifying, generating and communicating competing arguments, perspectives or problem-solving approaches • critical evaluation of problems, their solutions and their implications • use of quantitative analysis of data as the basis for deep and thoughtful judgments, drawing insightful, carefully qualified conclusions from this work • creativity in application as appropriate to the discipline • eloquent and sophisticated communication of information and ideas in terms of the conventions of the discipline • consistent application of appropriate skills, techniques and methods with outstanding levels of precision and accuracy • all or almost all answers correct, very few or none incorrect
Distinction (D) 75-84%	For performance that provides evidence of a superior level of attainment of the relevant subject learning outcomes, demonstrating the attributes of a credit grade plus (as applicable) one or more of the following: • evidence of integration and evaluation of critical ideas, principles, concepts and/or theories • distinctive insight and ability in applying relevant skills, techniques, methods and/or concepts • demonstration of frequent originality in defining and analysing issues or problems and providing solutions • fluent and thorough communication of information and ideas in terms of the conventions of the discipline • frequent application of appropriate skills, techniques and methods with superior levels of precision and accuracy • most answers correct, few incorrect
Credit (C) 65-74%	For performance that provides evidence of a high level of attainment of the relevant subject learning outcomes, demonstrating the attributes of a pass grade plus (as applicable) one or more of the following: • evidence of learning that goes beyond replication of content knowledge or skills • demonstration of solid understanding of fundamental concepts in the field of study • demonstration of the ability to apply these concepts in a variety of contexts

	• use of convincing arguments with appropriate coherent and logical reasoning • clear communication of information and ideas in terms of the conventions of the discipline • regular application of appropriate skills, techniques and methods with high levels of precision and accuracy • many answers correct, some incorrect
Pass (P) 50-64%	For performance that provides evidence of a satisfactory level attainment of the relevant subject learning outcomes, demonstrating (as applicable) one or more of the following: • knowledge, understanding and application of fundamental concepts of the field of study • use of routine arguments with acceptable reasoning • adequate communication of information and ideas in terms of the conventions of the discipline • ability to apply appropriate skills, techniques and methods with satisfactory levels of precision and accuracy • a combination of correct and incorrect answers
Fail (F) <50%	For performance that does not provide sufficient evidence of attainment of the relevant subject learning outcomes.
Technical Fail (TF)	When minimum performance level requirements for at least one assessment item in the subject as a whole has not been met despite the student achieving at least a satisfactory level of attainment of the subject learning outcomes.

https://www.uow.edu.au/curriculum-transformation/aqc/uowgradedescriptors/index.html

Plagiarism - University's Academic Integrity Policy

The University's policy on acknowledgement practice and plagiarism provides detailed information about how to acknowledge the work of others: http://www.uow.edu.au/about/policy/UOW058648.html

The University's Academic Integrity Policy, Faculty Handbooks and subject guides clearly set out the University's expectation that students submit only their own original work for assessment and avoid plagiarising the work of others or cheating. Re-using any of your own work (either in part or in full) which you have submitted previously for assessment is not permitted without appropriate acknowledgement or without the explicit permission of the Subject Coordinator. Plagiarism can be detected and has led to students being expelled from the University.

The use by students of any website that provides access to essays or other assessment items (sometimes marketed as 'resources'), is extremely unwise. Students who provide an assessment item (or provide access to an assessment item) to others, either directly or indirectly (for example by uploading an assessment item to a website) are considered by the University to be intentionally or recklessly helping other students to cheat. Uploading an assessment task, subject outline or other course materials without express permission of the university is considered academic misconduct and students place themselves at risk of being expelled from the University.

When you submit an assessment task, you are declaring the following

1. It is your own work and you did not collaborate with or copy from others.

2. You have read and understand your responsibilities under the University of Wollongong's Academic Integrity Policy on plagiarism.

3. You have not plagiarized from published work (including the internet). Where you have used the work from others, you have referenced it in the text and provided a reference list at the end to the assignment.

Students must remember that:

- Plagiarism will not be tolerated.

- Students are responsible for submitting original work for assessment, without plagiarising or cheating, abiding by the University's Academic Integrity Policy as set out in the University Handbook, the University's online Policy Directory and in Faculty handbooks and subject guides.

Student Academic Complaints Policy (Coursework or Higher Degree Research)

In accordance with the Coursework Student Academic Complaints Policy, a student may request an explanation of a mark for an assessment task or a final grade for a subject consistent with the student's right to appropriate and useful feedback on their performance in an assessment task. Refer to the Coursework Student Academic Complaints Policy for further information
http://www.uow.edu.au/about/policy/UOW058653.html

General Advice

This outline should be considered in conjunction with policy documents available through the University of Wollongong website. Those policies are subject to revision.