ISIT307/MTS9307 - BACKEND WEB PROGRAMMING

SUBJECT REVISION

ASSESSMENT

Assessment Items	Percentage of Final Mark		Due Date
	Marks for the Item	Minimum required for a pass	
Assignment 1 (group work – 2 students)	25	N/A	As scheduled
Assignment 2 (individual work)	25		As scheduled
Final Exam (TBA)	50	20	Exam week as per schedule
Total	**100**	**50**	**The mark must be ≥50 to pass the subject**

TECHNICAL FAIL

- To be eligible for a Pass in this subject a student must achieve a mark of at least 40% in the Final exam
  - Final Exam (20 out of 50)

- Students who fail to achieve this minimum mark & would have otherwise passed may be given a TF (Technical Fail) for this subject.

DEFERRED/SUPPLEMENTARY EXAMS

- Deferred Exams will be dealt in accordance with student academic consideration policy (https://policies.uow.edu.au/document/view-current.php?id=91)
- The School will assess each case on its own merit and there is no guarantee a deferred/supplementary exam will be granted.
- If a deferred/supplementary exam is granted, you will normally be notified via SOLS Mail the time and date of this supplementary exam. You must follow the instructions given in the email message.
- Please note that if this is your last session and you are granted a deferred/supplementary exam, be aware that your results may not be processed in time to meet the graduation deadline.

FINAL EXAM

- 3 Hours
- Exam schedule

Double-check the personal exam timetable to ensure you are at the right place and time.

FINAL EXAM – QUESTION TYPES

- **Part A: short & long answer (theory) questions**
  (5 questions x 4 marks = 20 marks)
  - What is …
  - What are …
  - Explain …
  - Compare and contrast ….
  - What are similarities / differences ….

- **Part B: coding questions**
  (5 questions x 6 marks = 30 marks)
  - What is the output of the given code fragment & explain the code (1 question)
  - Write PHP script (code segment) that will solve the problem … / given below. (4 questions)

FINAL EXAM - EXAMPLES

- Part A: short & long answer questions (20 marks)
  - How we can declare a PHP code block? Write a short PHP script that will display "PHP is easy".
  - Explain the tools that can be used for maintaining web site's state information.
  - Explain the difference between …

FINAL EXAM - EXAMPLES

- Part B: coding questions (30 marks)
  - What is the purpose and the output produced by each of the following code fragments? Explain your answer and add comments.

```
<?php
$HospitalDepts = array(
     "Anesthesia",
     "Molecular Biology",
     "Neurology",
     "Pediatrics");
array_pop($HospitalDepts);
array_push($HospitalDepts, "Psychiatry", "Pulmonary
Diseases");
?>
```

FINAL EXAM - EXAMPLES

- Part B: coding questions (30 marks)
  - Write a PHP script that will define a class “My_Class” with data member *name*, constructor, get and set accessor functions for the data member, and method for printing the value of the data member. Create an object “my_name” and display the value of the created object. (Object “my_name” can have a value "Jasper").

    Create class ‘New_Class’ that will inherit “My_Class” ….

SUBJECT OUTLINE

- The subject 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.
- 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.

INTRODUCTION

- Create PHP scripts
- Create PHP code blocks
- Work with variables and constants
- Study data types
- Use expressions and operators

FUNCTIONS AND CONTROL STRUCTURES

- Learn how to use functions to organize the PHP code
- Learn about variable scope
- Learn `if` statements, `if...else` statements, and `switch` statements
- Learn `while` statements, `do...while` statements, `for`, and `foreach` statements
- Learn about `include` and `require` statements

MANIPULATING STRINGS

- Construct text strings
- Work with single strings
- Work with multiple strings and parse strings
- Compare strings
- Use regular expressions

HANDLING USER INPUT

- Learn about autoglobal variables
- Build HTML Web forms
- Process form data
- Handle submitted form data
- Create an All-in-One form
- Display dynamic data based on a URL token

WORKING WITH FILES AND DIRECTORIES

- Understand file type and permissions
- Work with directories
- Upload and download files
- Write and Read data to files
- Open and close a file stream
- Manage files and directories

MANIPULATING ARRAYS

- Manipulate array elements
- Declare and initialize associative arrays
- Iterate through an array
- Find and extract elements and values
- Sort, combine, and compare arrays
- Use arrays in Web forms
- Multidimensional arrays

PHP OBJECT-ORIENTED PROGRAMMING

- Study object-oriented programming concepts
- Use objects in PHP scripts
- Declare data members in classes
- Work with class member functions
- Inheritance
- Polymorphism, Interfaces, Abstract classes, Traits

MANIPULATING MYSQL DATABASES WITH PHP

- Connect to MySQL from PHP
- Work with MySQL databases using PHP
- Create, modify, and delete MySQL tables with PHP
- Use PHP to manipulate MySQL records and retrieve database records
- PHP prepared statements

MANAGING STATE INFORMATION

- Learn about state information
- Use hidden form fields to save state information
- Use query strings to save state information
- Use cookies to save state information
- Use sessions to save state information

PHP-XML, PHP-AJAX
RECURSION AND DATA STRUCTURES IN PHP

- XML, PHP XML Parsers
- AJAX, Using AJAX with PHP
- Recursion
- Data structures

MY FINAL ADVICES FOR THE EXAM

- Review all lectures, explained examples, and textbook/referenced sources
- Review all labs
- Review the assignments solutions

- Good luck