MONASH University
Information Technology

FIT4041
Web development

Unit Guide

Semester 2, 2010

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FIT4041 Web development - Semester 2, 2010

Chief Examiner:

None provided

Lecturer(s) / Leader(s):

Caulfield

Dr Des Casey
Course Director BITS
Room 73, Building H7, Caulfield
Phone: +61 3 990 31081
Fax: +61 3 990 31077

Contact hours: In scheduled help sessions, or email for appointment

Introduction

Welcome to FIT4041 Web development. This unit covers more advanced aspects of web site development and involves developing web based applications, including mobile applications.

Unit synopsis

Content covered in this unit, includes: Static and dynamic web pages; ASP.Net environment; HTML forms reviewed; Standard server controls; C# language; Page life cycles; Event driven programming and postback; C# basics; Objects in C#; Namespaces and core objects; State handling; Objects and structured data; Validation controls; Master pages; Themes and skins; Navigation controls; Using data sources; Reading and updating data stores; XML files as data store; Using Grids; Data binding; Configuration and optimisation; Authentication; Email and accessing file systems; Components and user controls; Code behind; .NET Assemblies; Custom Server Controls; Using Ajax; Mobile Web page development; Styling page output; and New device support.

Learning outcomes

At the completion of this unit students will have:

- an understanding of web environments and their components;
- an understanding of the principles of object oriented Internet applications development;
- the knowledge and skills to design and implement web based applications, using a server side applications development environment;
- the knowledge and skills to design and implement mobile applications;
- the knowledge and skills to implement data stores in web based applications;
- a professional attitude towards the development of web based information systems.

Workload

This unit is taught in ONLINE DAY flexible mode using the Walkabout u-Learning environment. Students will need to spend 12 hours per week working on the unit. On-campus and on-line help sessions are provided.

Unit relationships

Prerequisites

FIT9017 or similar unit in object oriented programming.

Prohibitions

FIT3043

Teaching and learning method

Teaching approach

This unit is offered in flexible mode. Students learn from the purpose designed website which contains learning materials including audio lectures, exercises, quizzes, personal note taking. There are also on-campus and online real time help sessions.

Task based learning is used: students have only one deadline: the end of the semester, by which time they need to have completed a series of relatively small tasks. Tasks are corrected progressively as they are submitted.

The content is not presented as weekly topics, but as a specific task, and then associated learning materials that need to be mastered in order to complete the task.

There are also learning quizzes and sub-tasks to help progress to the major task.

Timetable information

For information on timetabling for on-campus classes please refer to MUTTS, http://mutts.monash.edu.au/MUTTS/

Tutorial allocation

On-campus students should register for tutorials/laboratories using the Allocate+ system: http://allocate.its.monash.edu.au/

Unit Schedule

Week	Date*	Topic	Key dates
1	19/07/10	Serving static and dynamic web pages. Setting up a development environment (ASP.NET). An overview of a development environment.	Tasks and quizzes may be submitted at any time during the semester
2	26/07/10	HTTP protocol reviewed. HTML forms reviewed. Server controls.	Tasks and quizzes may be submitted at any time during the semester
3	02/08/10	C# basics: data types and operators; control structures and functions. Event driven programming and postback. Objects in C#. Static class members and class relationships.	Tasks and quizzes may be submitted at any time during the semester
4	09/08/10	Namespaces and core objects. State handling. Objects and structured data.	Tasks and quizzes may be submitted at any time during the semester
5	16/08/10	Using data sources. Reading data with ADO.NET objects. Manipulating data.	Tasks and quizzes may be submitted at any time during the semester

6	23/08/10	User interaction to retrieve data. Manipulating XML as a data store. Navigating the nodes	Tasks and quizzes may be submitted at any time during the semester
7	30/08/10	Types of server controls. Page lifecyles and using server controls. Intrinsic, validation and rich controls. Data rendering controls. Calendar control example	Tasks and quizzes may be submitted at any time during the semester
8	06/09/10	Components and user controls. Code behind. Compiled .NET Assemblies. Custom Server Controls. Configuration. Optimisation. Authentication.	Tasks and quizzes may be submitted at any time during the semester
9	13/09/10	DataGrids advanced features: paging, sorting, customising. DataLists: customising. DataGrids: master/detail displays	Tasks and quizzes may be submitted at any time during the semester
10	20/09/10	Sending email with ASP.Net. Accessing the web server file system. ASP.Net 2.0 master pages	Tasks and quizzes may be submitted at any time during the semester
Mid semester break			
11	04/10/10	Introduction to Ajax. Ajax with ASP.Net. Applications using Ajax with ASP.Net	Tasks and quizzes may be submitted at any time during the semester
12	11/10/10	Web pages for mobile devices. navigating a mobile site. List controls and data binding. Validation controls. Rich controls. Styling page output. Writing controls. New device support	Tasks and quizzes may be submitted at any time during the semester
13	18/10/10	Revision	Tasks and quizzes may be submitted at any time during the semester

*Please note that these dates may only apply to Australian campuses of Monash University. Off-shore students need to check the dates with their unit leader.

Improvements to this unit

At the end of each semester, students are asked to complete an online questionnaire about how they found working in an online mode. Feedback from this questionnaire is used to make improvements to the Walkabout learning method and the physical system itself

Unit Resources

Prescribed text(s) and readings

Text books are available from the Monash University Book Shops. Availability from other suppliers cannot be assured. The Bookshop orders texts in specifically for this unit. You are advised to purchase your text book early.

Recommended text(s) and readings

No books recommended. Students can use various Internet resources as needed

Required software and/or hardware

The following software can be downloaded from the unit web site. This software is also available in designated laboratories

Firefox. Browser

Microsoft Internet Explorer Version 6.0 or later. Browser for viewing web pages.

Top Style Lite Editor

Install Zip.

WS-ftp.

Openwave Phone Emulator (Version 7.0).

Microsoft Visual Studio 2008

Opera Mobile Browser

Software may be:

- downloaded from http://walkabout.infotech.monash.edu.au/walkabout/fit3043
- Visual studio is distributed on CD

Equipment and consumables required or provided

Students may use the facilities available in the computing labs. Information about computer use for students is available from the ITS Student Resource Guide in the Monash University Handbook. You will need to allocate up to **8** hours per week for use of a computer.

Study resources

Study resources we will provide for your study are:

- detailed content notes,
- sub-task exercises and solutions,
- task specifications,

- sample exam and supplementary materials
- the walkabout website, containing everything required for the unit: http://walkabout.infotech.monash.edu.au/walkabout/FIT3043

Assessment

Overview

Examination (3 hours): 50%; In-semester assessment: 50%
Students must gain a satisfactory result in both the practical and exercises work and the exam to gain a pass in the unit. The examination must be sat at a Monash campus.

Faculty assessment policy

To pass a unit which includes an examination as part of the assessment a student must obtain:

- 40% or more in the unit's examination, and
- 40% or more in the unit's total non-examination assessment, and
- an overall unit mark of 50% or more.

If a student does not achieve 40% or more in the unit examination or the unit non-examination total assessment, and the total mark for the unit is greater than 50% then a mark of no greater than 49-N will be recorded for the unit.

Assignment tasks

Assignment coversheets

Assignment coversheets are available via "Student Forms" on the Faculty website:
http://www.infotech.monash.edu.au/resources/student/forms/
You MUST submit a completed coversheet with all assignments, ensuring that the plagiarism declaration section is signed.

Assignment submission and return procedures, and assessment criteria will be specified with each assignment.

Assignment submission and preparation requirements will be detailed in each assignment specification. Submission must be made by the due date otherwise penalties will be enforced. You must negotiate any extensions formally with your campus unit leader via the in-semester special consideration process: http://www.infotech.monash.edu.au/resources/student/equity/special-consideration.html.

- **Assignment task 1**

  Title:
  Unit tasks
  Description:
  This unit uses task based learning. Students complete a series of relatively small tasks in the course of the unit. These tasks take the place of the conventional assignments.

  Each task typically requires the student to design and code a web application, using ASP.Net.
  Weighting:
  41%
  Criteria for assessment:
  Each task comes with a detailed assessment spreadsheet showing the criteria for assessment. Criteria include the completion of the details web site specifications.

Due date:
End of semester
Remarks:
This unit gives students flexibility with their time. Students may submit tasks at any time throughout the smester. Tasks are corrected at a number of published task correction points. Students gain tak feedback though correction sheets and at on campus or online help sessions

- **Assignment task 2**

Title:
Multiple choice quizzes
Description:
Students complete a series of timed online quizzes during the semester, each of 10 questions. Quizzes test the material learned in the tasks. Quizzes are marked as student completes the quiz, and the student is informed of the result
Weighting:
9%
Criteria for assessment:
Quizzes are multiple choice: right or wrong
Due date:
End of semester
Remarks:
Like the tasks themselves, the attached quizzes may be taken at any time throughout the semester

Examination

-
Weighting:
50%
Length:
3 hours
Type (open/closed book):
Closed book
Electronic devices allowed in the exam:
None

See Appendix for End of semester special consideration / deferred exams process.

Due dates and extensions

Please make every effort to submit work by the due dates. It is your responsibility to structure your study program around assignment deadlines, family, work and other commitments. Factors such as normal work pressures, vacations, etc. are not regarded as appropriate reasons for granting extensions. Students are advised to NOT assume that granting of an extension is a matter of course.

Students requesting an extension for any assessment during semester (eg. Assignments, tests or presentations) are required to submit a Special Consideration application form (in-semester exam/assessment task), along with original copies of supporting documentation, directly to their lecturer within two working days before the assessment submission deadline. Lecturers will provide specific outcomes directly to students via email within 2 working days. The lecturer reserves the right to refuse late applications.

A copy of the email or other written communication of an extension must be attached to the assignment submission.

Refer to the Faculty Special consideration webpage or further details and to access application forms: http://www.infotech.monash.edu.au/resources/student/equity/special-consideration.html

Late assignment

Late task submissions are not accepted for correction, and zero marks are awarded accordingly. The only exception to this is in the case of illness or other serious cause. In any such cases, proper third party documentation (e.g. a doctor's certificate) would have to be supplied. Where a doctor's certificate is supplied, then an extension may be allowed for time specified on the doctor's certificate.

Return dates

Students can expect assignments to be returned within two weeks of the submission date or after receipt, whichever is later.

Feedback

Types of feedback you can expect to receive in this unit are:

Informal feedback on progress in labs/tutes

Graded assignments without comments

Quiz results

Students receive a detailed breakdown of marks awarded for each task completed. For more detailed qualitative feedback, students see the lecturer in help sessions or other class time, or make an appointment to discuss a task.

Appendix

Please visit the following URL: http://www.infotech.monash.edu.au/units/appendix.html for further information about:

- Continuous improvement
- Unit evaluations
- Communication, participation and feedback
- Library access
- Monash University Studies Online (MUSO)
- Plagiarism, cheating and collusion
- Register of counselling about plagiarism
- Non-discriminatory language
- Students with disability
- End of semester special consideration / deferred exams