

CSC2406

Web Publishing

Faculty of Sciences

Introductory Book

Semester 1, 2009

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Preamble

The information in this Introductory book was correct at the time of printing. We cannot guarantee it will not change during the semester.

The definitive source of information for this course can be found at the course web site—

`http://usqconnect.usq.edu.au`

and

`http://www.sci.usq.edu.au`

It is your responsibility to check this site periodically and keep yourself apprised of corrections, changes and additions to all the course material.

Introduction to Web Publishing

Welcome to the course CSC2406, *Web Publishing*. This course will deal with the technical aspects of web publishing.

It will cover:

- The HyperText Markup Language (HTML). The language for formatting web pages.
- The HyperText Transfer Protocol (HTTP). This is the language which allows communication between a web browser and a web server.
- MIME typing. This is the convention which allows the client to launch the correct helper application or plug-in to process or display a file.
- Server and client side image maps, JPEG, GIF and PNG image formats. Image maps allow hyper links to be attached to various regions of an image. When designing a site it is important to be aware of the advantages and disadvantages of the three main image formats.
- The HTML *Frames* and *Table* tags. These allow pages to be formatted in blocks.
- Document and site design. It is important to understand the limitations of the media so that your pages and site are viewable by the largest audience.
- The PHP scripting language—which will be used to create CGI scripts.
- The HTML *Forms* tag. Forms pages allow users to submit data to a server.
- CGI scripts to process Forms input. These are the programs run by the server to process the input data from a forms page.
- Server Configuration *i.e.* the various server options available when constructing a web site.
- Server Security *i.e.* how to keep a server secure but retain the flexibility and access required for the Web.

At the end of the course you should have a working knowledge of web client and server interaction, how to configure a web server and how to administer a server with varying security requirements.

To be able to develop the required technical expertise in Web Publishing you will be required to install and run a web server. The notes for this

course are written with a specific server and operating system in mind. As all of the concepts developed and outlined in this course are applicable to all servers and operating systems the choice of one server and operating system should not be viewed as a restriction. Once you understand how one server works, you pretty much understand them all.

This course is not an advanced course in currently popular web technologies. nor is it a comprehensive overview of running and installing web servers on all possible operating systems. It is an introduction to the basic key concepts needed to be understood if you wish to run and maintain your own web site.

Resource Materials

To be able to utilise any of the resources for this course a student must

- register to receive mail at USQConnect or have a valid email address with an ISP.
- be able to access the USQ StudyDesk.

Internet Access Due to the nature of this course, Internet access is mandatory. Students in Day mode will have access to Internet facilities at the University.

External students who don't have Internet access yet should contact their local Internet Service Provider (ISP). It is the responsibility of the student to ensure that he/she has reliable Internet access and computer facilities.

Electronic Mail Every student enrolled at USQ has access to electronic mail via USQConnect. To be able to send mail requires no action **but** to receive mail you must register for it. Every student in this course **must** have a valid email address registered with the university.

It is important to ensure you have a registered email account as soon as possible.

Study Book The study book for this course will be available only through the Web. No printed material will be supplied. All information about this course can be found on the Course Web site on the USQ Study-Desk

This site contains all the information you will need to successfully complete this course. This should be your first and only stop for information on this course.

Computer Accounts All students taking this course will be given an account on the Department of Mathematics and Computing machine

`decius.sci.usq.edu.au`

This computer is running the Linux operating system. Students should be (or become) familiar with this flavour of Unix. This is the only operating system that will be supported. It is not mandatory to use this machine for your work.

The Debian GNU/Linux distributed with the Mathematics and Computing DVD 2 is the required operating system for this course. This is because the

1. USQ Department of Mathematics and Computing cannot provide support for any other operating systems and
2. your assignments must work successfully when run on Debian GNU/Linux. The assignments will be assessed by installing them on a machine running Debian GNU/Linux and an Apache Web server.

Internet Software To be able to access all the required resources and be able to submit assignments you must have access and be familiar with the following software:

Web Browser One of Firefox, Opera, Konquerer or Microsoft's Internet Explorer.

PuTTY Under Windows this program is used to log onto and have a secure command line access to a remote machine. This is a Windows implementation of the Unix programs `ssh` and `scp` (Secure Shell and Secure Copy).

Text Editor A text editor you are comfortable with.

Web Server Software Web clients request documents from Web Servers. Irrespective of the type of computer the server is on, the web server and web browser speak the same language. At this level of interaction all web servers look the same (or should). Unfortunately from an administrative perspective not all servers are created equal. Some of these differences are obviously dictated by the operating system running the server. Due to the tasks a server must perform these differences are small. The basic administrative concepts are the same for all servers. For this reason we have decided to use and support only one server and one operating system in this course. The server is the Apache server (version 1.3.x) running on the Linux operating system. The advantage of using this configuration is that both are free and both are ubiquitous. The Apache server has the added advantage of a comprehensive web site (<http://www.apache.org>) and ease of use. Apache is available for Unix and Microsoft Windows.

The Apache server needs to be installed into your home directory on your own machine or onto the Mathematics and Computing machine *decius*.

The file `CSC2406.run` contains a pre-compiled copy of the Apache server. This version of the Apache server has been compiled for the Linux operating system and the Intel 386 architecture. If you wish to run the server on a different system you will need to download the source from the Apache web site.

The file `CSC2406.run` can be found on the course web site.

To install the server copy the file `CSC2406.run` into your home directory and execute the following commands at the command line prompt

```
cd ~  
sh CSC2406.run
```

This command will create a directory called `CSC2406` and install the Apache server

If you have any problems, use the Course Forum or go to the web site for further information.

If you wish to install Apache on your own computer and use it locally you can, but no support will be given if your machine is running anything other than Debian GNU/Linux.

A precompiled version of the Apache server is available in the Debian GNU/Linux distribution and most other Linux distributions. Please do not use the server that comes with your Linux distribution as it will not have been configured for use with this course.

Assessment

You are to complete two assignments (30% of the mark for this course) and sit an examination for this course (70% of the mark for this course). To obtain a passing grade you must give a satisfactory performance overall in both assignments and also the examination.

Consult the course web site for more information.

Assignment Submission Assignments will be submitted via the web. See the individual assignments for further details. The assignment specifications can be found on the course web site.

Late Assignments Requests for an extension will not be considered after the due date for the assignment, except in very exceptional circumstances. Request for extensions should be accompanied by documentary evidence to support the claim (e.g. doctor's certificate) or they may not be considered.

Work commitments are not usually considered a valid reason for requesting an extension. Problems associated with access, equipment failure or the use of unsupported software are likewise not usually considered a valid reason for requesting an extension.

No extension will be granted later than one week prior to the date of the final exam.

A penalty of 5% per day will be given for late assignments for each working day late—up to 10 working days at which time a mark of zero will be given.

Examination The examination will be of **two hours** duration and **closed book**, that is, you will not be permitted to consult any books or notes.

Course Support

Support for this course is available for all enrolled students. The main avenues for help, in order, are

- The course web pages.
- The course Forum. The forum is to be used as a general question and answer forum. Any query posted to the forum should be answered by anyone who can. It is not just to be a forum for the lecturer of the course but as a general communication forum for all the students in the course.
- If you need to communicate to the lecturer of the course then the email address `lec.csc2406.s1@www.sci.usq.edu.au` will send email to the lecturer of the course.
- You can also communicate to the lecturer of the course via **Outreach Services**. (Please avoid this system if possible as the response web interface is not user friendly so it makes it difficult to answer queries).
- If you have a specific Linux question you can contact the lecturer or send email to `linux@www.sci.usq.edu.au`

General Support

Types of enquiries

You have access to a wide variety of support services at USQ. Follow the details below or visit the *Current Students* website at

<http://www.usq.edu.au/currentstudents/default.htm>

for more information.

General enquiries

USQAssist is the most efficient method for requesting assistance for:

- administrative queries,
- assignment submissions (see *Course Support* above),
- study assistance,
- contacting your lecturer (see *Course Support* above).

Technical enquiries

Enquiries relating to access to USQConnect, the USQStudyDesk, or other technical issues can also be directed to USQAssist. If you cannot access USQAssist, contact the Student IT HelpDesk on

+61 7 4631 1510

or email

usqconnect@usq.edu.au

for assistance. The Student IT HelpDesk is staffed weekdays between 8.00am and 5.00pm (AEST-Australian Eastern Standard Time), with voicemail after hours.

Types of support

There are a number of ways of accessing support services.

Online support

USQAssist is a web self-serve facility for you to:

- find answers to common questions at any time,
- ask any question,
- track the progress of your question,
- keep a record of questions and responses.

To access USQAssist go to <http://usqassist.usq.edu.au> or click on *USQAssist* in USQConnect.

Telephone support

If you prefer to telephone, call Outreach Services on 07 46312285

for assistance. Outreach Services is staffed weekdays between 8.30am and 5.30pm (AEST), with voicemail after hours. If you are located in Eastern Australia, contact your Regional Liaison Officer.

International students telephone the USQ International Office on +61 7 46312362,

or your Agent. USQ International is staffed weekdays between 9.00am and 5.00pm (AEST), with voicemail after hours.

Fax

International students fax the USQ International Office on +61 7 46362211.

All other students fax the Distance and e-Learning Centre on 07 46361049.

Postal address

The Administrator
Distance and e-Learning Centre
University of Southern Queensland
Toowoomba Qld 4350
Australia

USQConnect

USQConnect provides you with online access to information, services and course resources relevant to your studies from a convenient, central point. To access USQConnect, from the USQ home page at

<http://www.usq.edu.au>

click on USQConnect, or go directly to the URL at

<http://usqconnect.usq.edu.au>.

You will require your USQConnect username and password to access the system. You will be notified of this username and password on your first Letter of Offer or Enrolment Notice.

Study Desk

Your *StudyDesk* in USQConnect gives access to a home page for every course in which you are currently enrolled. Content available from the course home page will vary according to the teaching requirements of the course, but may include:

- course materials and resources,
- electronic discussion facilities,
- access to past examination papers.

As each course has specific learning requirements, availability of these features will vary between courses.

Important: This course does not use the USQ StudyDesk. All information about this course can be found at the URL <http://www.sci.usq.edu.au>, the Department of Mathematics and Computing web site.

USQAdmin

USQAdmin, also accessed through USQConnect, allows you to access a number of administrative functions such as changing your contact details, checking your enrolment details, accessing learning circles, checking final grades, viewing your exam timetable, changing your exam centre, and more.

Other Links

USQConnect also gives access to the Library and the Academic Learning Support site, as well as the Quick Links list of University sections and ser-

vices.

Study Schedule

Please consult the Course Web Site.