MACQUARIE
UNIVERSITY ~ SYDNEY

STAT 329

Electronic Commerce: Database Applications

Semester 2

2007

Students in this unit should read this unit outline carefully at the start of semester. It contains important information about the unit. If anything in it is unclear, please consult one of the teaching staff in the unit.

MACQUARIE UNIVERSITY

Division of Economic and Financial Studies

Stat 329

Unit Outline: Semester 2, 2007

Unit convenor Hilary Green

Prerequisites

The unit targets students planning a statistics major and who already have some basic computing skills including: knowledge of HTML, an understanding of relational database concepts and the ability to program in an object-oriented language such as VBScript or PHP (or willingness to learn). Thus students should have completed at least two-200-level Statistics units, or have equivalent knowledge.

About this unit

This unit covers website design and management and database design and management. In this unit, we will use the Internet Explorer browser, the Visual InterDev editor, IIS (Internet Information Server) running on NT, and SQL Server as the database. Students will also learn how to use PHP with MySQL.

Students will be given the opportunity to learn in hands-on mode, using web servers available in a dedicated laboratory, which will simulate the environment used by companies to develop their websites for commercial use.

Teaching Staff

Staff	Room	Phone	Email
Professor Don McNeil	E4B 308	9850 3590	dmcneil@efs.mq.edu.au
Hilary Green	E4A 513	9850 8562	hgreen@efs.mq.edu.au
Naong WongSai			

Classes

There will be one 2 hour lecture each week and one 2 hour practical. Students should attend all classes.

Lecture: Monday, 11am – 1pm in E3A 131
Practical: Monday, 2pm – 4pm in E4B 308
Practical: Monday, 4pm – 6pm in E4B 308

References

There is no single prescribed textbook. The following references will be used initially. Further references will be added to this list in due course as required. A copy of each book is available in E4B 308, but no book may be removed from this room.

Elizabeth Castro: *HTML for the World Wide Web* (4th ed). Peachpit Press. Berkeley: CA (2000).

Jason Beres: *SAMS Teach Yourself Visual Studio .Net 2003 in 21 Days*. SAMS Publishing. Indianapolis Indiana (2003).

Thomas A. Powell: *Web Design: The Complete Reference*. Osborne/McGraw-Hill. Berkeley: CA (2000).

Vanessa Donnelly: *Designing Easy-to-use Websites*. Addison-Wesley. Harlow: England (2001).

Ned Snell: *SAMS Teach Yourself to Create Web Pages in 24 Hours* (2nd ed). Macmillan. Indianapolis: Indiana (1999).

Kelly Valqui & Eunice Friere: *Web Design and Development*. Charles River Media. Hingham: MA (2001).

John Kauffman: *Beginning ASP Databases*. Wrox Press. Birmingham: UK (1999).

Timothy Eden & Patricia Hartman: *Active Server Pages in Plain English*. M&T Books. Foster City: CA (2001).

Mike Gunderloy & Joseph L Jorden: *Mastering SQL Server 2000*. Sybex. San Francisco: CA (2000).

Eric A Meyer: *Cascading Style Sheets: The Definitive Guide*. O'Reilly. Sebastopol: CA (2000).

David Flanagan: *JavaScript: The Definitive Guide* (4th ed). O'Reilly. Sebastopol: CA (2002).

Danny Goodman: *Dynamic HTML: The Definitive Reference*. O'Reilly. Sebastopol: CA (1998).

Stephen Walther & Jonathan Levine: *SAMS Teach Yourself E-Commerce Programming with ASP in 21 Days*. Macmillan. Indianapolis: Indiana (2000).

Michael Howard: *Designing Secure Web-Based Applications for Microsoft Windows2000*. Microsoft Press. Redmond: WA (2000).

Web Pages

The web page for this unit can be found at: http://www.stat.mq.edu.au/ug/units/stat_units300/stat329. Assignments will be available from this location.

In addition, we will be maintaining an intranet website for this unit. Lecture Overheads and Data, PowerPoint slides covering each week's material will be available on this Intranet site. This material will also be provided to enrolled

students, together with tutorial exercises and some relevant handouts. Some notes, and most datasets used, will also be downloadable from the Intranet website.

Learning Outcomes

The learning outcomes of this unit are:

- ❒ to gain an understanding of how websites are set up and maintained for private, commercial, and teaching use;
- ❒ to develop some expertise with the relevant software needed to develop such websites, namely a **browser**, a page **editor**, a **web server**, and a **relational database**; and
- ❒ to learn about relevant applications of web-database engineering, including statistical graphics systems and on-line data processing.

In addition to the discipline-based learning objectives, all academic programs at Macquarie seek to develop students' generic skills in a range of areas. One of the aims of this unit is that students develop the following: interpersonal skills; communication skills; critical analysis skills; problem-solving skills and creative thinking skills.

Teaching and Learning

In this unit, we will use the Internet Explorer browser, the Visual Studio .NET 2003 editor, IIS (Internet Information Server) running on NT, and SQL Server as the database. We will also learn how to use PHP with MySQL. For students enrolled in Stat 329 these facilities are available in the Statistics Department's Advanced Computing Laboratory Intranet in E4B 308 and E4B 202.

In the lectures we introduce the relevant material, explain concepts and demonstrate these with a variety of applications.

In the practical sessions which follow, students use the programs in the laboratories to practice and develop these skills and methods.

You may be required to present some homework based on these practical sessions.

To enhance individual learning, groups will be formed in the third week, and the group (rather than the individual) will submit some assignments (including the second assignment). Each group will comprise a project manager, a designer, and two programmers.

Since learning is often best achieved through group work, students enrolled in Stat 329 are strongly encouraged to share their knowledge with the students and lecturers.

Timetable

The proposed timetable at present is as follows:

Week	**Topic**	**Software Introduced**
1	Website design/architecture	HTML, Visual Studio
2	Review of Database concepts	MS Access, SQL Server
3	HTML & Setting up a database	
4	Setting up a Website	
5	Introduction to VBScript	VBScript
6	Introduction to JavaScript	JavaScript
7	Website Design 11	
8	Cascading Styles Sheets	CSS
9	Introduction to PHP and MySQL	PHP, MySQL
10	Maintaining State with Cookies	
11	Web-based data mining	
12	Graphing Bivariate Data and Internet polls	

Assignments

Students have the opportunity to demonstrate the skills acquired in the course in their assignments. Three assignments will be set and **on-time submission is compulsory**. The due dates are as follows:

Assignment 1:		Week 4	(13%)
Assignment 2:	*group*	Week 8	(14%)
Assignment 3:		Week 12	(13%)

Students must submit all assignments satisfactorily and on time. Students unable to submit any assignment on time, because of illness or other valid reason, will need to report the circumstances *in writing* to the lecturer.

More information relating to the requirements for the assignments will be made available when the assignments are handed out.

Examination

This will examine any material covered throughout the unit. Students may bring an A4 sized sheet of notes, formulas, etc., which may be hand written on both sides. Any other materials such as lecture notes and textbooks are not permitted. Calculators may be used, provided they are not of the text/programmable type. Mobile phones may not be used.

You are expected to present yourself for examination. The only exception to not sitting an examination at the designated time is because of documented illness or unavoidable disruption. In these circumstances you may wish to consider applying for Special Consideration. Information about unavoidable disruption and the special consideration process is available at http://www.reg.mq.edu.au/Forms/APSCon.pdf

If a Supplementary Examination is granted as a result of the Special Consideration process the examination will be scheduled after the conclusion of the official examination period.

Assessment

The overall assessment for Stat 329 is thus:

Assignments	40%
Final examination	60%

Attendance is necessary at all classes and will be monitored. Students with poor attendance will not be eligible for special consideration.

Your final grade will reflect your performance in **all** aspects of the course. In order to attain a particular grade in the unit, the requirement for that grade must be met in **the exam and the coursework**. You should also refer to the University's rules on grades, rule 10(2), http://handbook.mq.edu.au/PDFs/ug-bachelor-degree-rules.pdf .

Plagiarism

The University defines plagiarism in its rules: "Plagiarism involves using the work of another person and presenting it as one's own." Plagiarism is a serious breach of the University's rules and carries significant penalties. You must read the University's practices and procedures on plagiarism. These can be found in the *Handbook of Undergraduate Studies* or on the web at: http://www.student.mq.edu.au/plagiarism/ . Penalties may include deduction of marks, failure in the unit, and/or referral to the University Discipline Committee.

University Policy on Grading

Academic Senate has a set of guidelines on the distribution of grades across the range from fail to high distinction. Your final result will include one of these grades plus a standardised numerical grade (SNG).

Your raw mark for a unit (i.e., the total of your marks for each assessment item) may not be the same as the SNG which you receive. Under the Senate

guidelines, results may be scaled to ensure that there is a degree of comparability across the university, so that units with the same past performances of their students should achieve similar results.

For an explanation of the policy see
http://senate.mq.edu.au/rules/Guidelines2003.doc
http://senate.mq.edu.au/rules/detailedguidelines.doc.

Student Support Services

Macquarie University provides a range of Academic Student Support Services. Details of these services can accessed at http://www.student.mq.edu.au.

Advanced Statistics Computer Labs and their Conditions of Use

We have two labs that students can use the lab 308 during the term. The labs are fitted with surveillance cameras and the activities in the rooms are recorded for security purposes.

LAB OPENING HOURS

The building, E4B, where the lab is located, is open between 8 am and 10 pm on weekdays, 9 am – 5 pm weekends for weeks 1 to 13.

WARNING: students are strongly advised not to remain alone in the room after normal office hours.

You are encouraged to phone **University Security**

- phone x7112 from inside the lab,
- see http://www.ofm.mq.edu.au/security)

at any time after hours, during term time, if you require an escort to your vehicle or public transport.

WHILE USING E4B LABS YOU MUST COMPLY WITH ANY REQUEST BY MACQUARIE UNIVERSITY SECURITY STAFF.

To gain access to E4B 308

Each student must obtain a swipe-card which is to be used after hours at entry points to the building E4B and must be used at any time to access the lab.

Ask Susan Pe, in room E4A 542, to issue your access card. Susan is available during her office hours (Mon, Tues and Fri, 8.30 am – 4.30 pm).

NOTE:

- you must NOT lend your card to anyone
- you must carry your student ID with you when you use the card
- the campus security officers know the ID's of those students who are currently in the lab. They will periodically check the ID's of students in the lab. *Anyone without their student ID or who does not have his or her* ***own*** *swipe-card will be told to leave the building immediately*

- *swipe-cards that have been borrowed from another student will be immediately confiscated and no replacement card will be issued*
- *you need to bring your swipe card to the final exam to hand it to your lecturer.*

Obtaining User Account in these labs

Each student will be given a user name and password for these labs once they are listed as enrolled in a MIST unit or in particular STAT units. After the first time logging into the server, the students need to change their password. The new (changed) password will expire in 30 days and needs to be changed again. If you do not change your password, you will not be able to login to the server again. If this happens, please talk to your tutor or the computer lab administrator:

Mr. Alfred Wong, awong@efs.mq.edu.au phone: 9850 6469

A time-table for the classes scheduled for each week will be displayed on the door of E4B308. If there is a class in progress, students who are not enrolled in that class are not allowed to use the computers in the lab without permission from the tutor.

PROBLEMS WITH LAB COMPUTERS?

Problems with lab computers (E4B 308) should be reported as follows:

1. if the problem occurs during a class report problem to your tutor
2. if problem occurs outside class time, then report problem by phone or e-mail to the lab administrator

   Mr Alfred Wong awong@efs.mq.edu.au (ext 6469)

   USING YOUR MU E-MAIL BROWSER ACCOUNT and no other (staff are instructed to ignore e-mails from Hotmail accounts, etc). BE SURE TO INCLUDE YOUR NAME AND CLASS, THE LAB AND PC NUMBER AND A BRIEF DESCRIPTION OF THE PROBLEM.