Course Outline

COMP1000
Introduction to World Wide Web, Spreadsheets and Databases
Semester 1 2015

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Course Staff

Contact Details

Staff Name	Role	Email	Phone
Edwin Bonilla	Course Convenor	e.bonilla at unsw.edu.au	93856255
Wen Hu	Lecturer	wen.hu at unsw.edu.au	93857679

Consultations

Staff Name	Day/Time	Location
Edwin Bonilla	Wednesday 1400-1500	K17_402 (Week 7 - 12)
Wen Hu	Wednesday 1400-1500	K17_402 (Week 1 - 6)

Course Details

Course Code: COMP1000

Course Title: Introduction to World Wide Web, Spreadsheets and Databases

Units of Credit: 6

Course WebSite: http://www.cse.unsw.edu.au/~cs1000/

Handbook Entry: http://www.handbook.unsw.edu.au/undergraduate/courses/2015/COMP1000.html

Course Summary

This course will explore fundamental concepts of the world wide web (www) spreadsheets and databases. We will explain in straightforward terms the concepts underlying www, spreadsheets and databases and their advantages so that students can exploit them effectively. Besides lectures, this course will have weekly labs. The labs will help you to put into practice the knowledge acquired from lectures; ultimately leading to the outcome that you will be able to develop web, spreadsheet and database applications.

Course Aims

TThe UNSW Handbook description of COMP1000 can be found here. The world-wide web (www) is a part of the internet. Spreadsheets and databases form important components of the tools and frameworks in modern technology that students can use in their studies and future careers. This course aims to explain in straightforward terms the concepts underlying www, spreadsheets and databases and their advantages, so that students can exploit them effectively. At the end of this course, students should acquire the skills to design and build their own web pages, spreadsheet applications using Microsoft Excel, and database applications using Microsoft Access. Students should also have an enhanced capacity to transfer these skills to other spreadsheet and database packages.

Student Learning Outcomes

After completing COMP1000, students should

- have an informal and yet technically sound knowledge of the fundamentals of the www, and be able to build their own simple web sites, and understand how they work.
- properly understand the differences between spreadsheets and databases and when it is appropriate to use one rather than the other;
- understand the computational concepts underlying modern spreadsheet and database applications; and,
- be able to design and implement sophisticated spreadsheet and database applications.

Assumed Knowledge

COMP1000 is intended for students with not prior tertiary study of computer science. Many, perhaps most, students who take COMP1000 do so in part to meet the UNSW General Education requirement. As COMP1000 is offered by the Faculty of Engineering, Engineering students are not able to count COMP1000 towards their General Education requirement.

Teaching Rationale

- Present the concepts and techniques involved building databases and spreadsheet applications.
- Solving a smaller problem with an awareness of the big picture.
- Designing a solution with an interactive tool.

See also aspects of the section titled Resources for Students.

Teaching Strategies

1. **Lectures** provide a detailed description of the material covered by the course, in an environment that provides a chance to ask questions and listen to the answers to other students' questions. Because the lecturer can see the students' reactions, the lecturer can gauge their level of understanding, and expand on technical material that seems to need further explanation; We have 3 hours of lectures each week from weeks 1 to 12.
2. **Textbooks and reference books** provide supplementary material, and/or a slightly different point of view on the technical material. They also have exercises, describing step-by-step how to perform tasks in Excel and Access.
3. **Programming laboratories** provide an opportunity to practise the skills being learned in lectures. In computing particularly, learning requires doing. We have 2 hours of face-to-face lab times, where students can work on in the lab and gain individual feedback from the lab demonstrators.
4. **Consultation sessions** give students an opportunity to ask the lecturers, one-on-one, specific questions about any of the course material that they might be uncertain about;
5. The **Midsession** and **final examination**: nobody I know enjoys examinations (either sitting them or marking them) but they do provide a focus and a deadline to make sure you revise the material covered in the course. Revision can be an important part of learning.

Assessment

The assessment for this subject will consist of:

- laboratory class performance (30%)
- mid-semester test in a lecture slot in week 7 (20%)
- 2 hour final exam (50%)

Lab marks

The criteria by which lab marks will be assigned are explained in each lab specification.

Procedure for submitting labs

This is explained in each lab specification. You may be asked to submit a lab electronically, or the lab may be marked on the spot by the lab demonstrator. There are 11 weeks in which labs are held. The marks for your best 10 labs (out of 11) will be used to determine your overall lab performance mark. The material covered in lab classes may also be tested in the final exam.

Policy on Late Submission

Late submission of labs is not permitted. If you miss a lab through illness or misadventure, you can either rely on the fact that only the best 10 labs count for your lab performance mark, or you can submit a request for special consideration, with documentation in the form of a medical certificate or other appropriate evidence, via the UNSW process for special consideration.

Rationale for Each Lab Assessment

See section on Relationship between objectives and assessment below.

Relationship between objectives and assessment

Each lab class develops skills in the topics covered in recent lectures, and the assessment for the lab is designed to check that you have indeed developed these skills.

The mid-session test is designed to provide students with feedback on their performance on the topics covered in the first part of the course. It is planned to hold the test in part of the lecture time in week 7, but probably located in a lab.

The final exam tests students on the learning objectives that are not covered in the programming assignments: see below for more details.

Laboratory Classes

When available, the instructions for each lab will be accessible via the menu on the class web page.

Labs must be marked during your 2-hour lab slot. You can prepare for them and start them in advance at home if you find it difficult to complete them in the 2-hour lab slot.

You may also use the CSE labs at other times, e.g. for practice. Try to avoid other formal class times. When other classes are scheduled for the lab, you may need to ask the tutor whether you can use one of the computers, and you will need to work silently.

Academic Honesty and Plagiarism

Plagiarism is defined as "using the words or ideas of others and presenting them as your own". UNSW and CSE treat plagiarism as academic misconduct, which means that it carries penalties as severe as being excluded from further study at UNSW. There are several on-line sources to help you understand what plagiarism is and how it is dealt with at UNSW:

- Learning Centre: Plagiarism and Academic Integrity
- MyUNSW: Academic Misconduct
- CSE: Addendum to UNSW Plagiarism Guidelines
- CSE: Yellow Form (whose terms you have agreed to)

Make sure that you read and understand these. Ignorance is not accepted as an excuse for plagiarism.

Course Schedule

Week	Lecture	Lab
1	Spreadsheets: chapters 1 & 2	-
2	Spreadsheets: chapters 3 & 4	Lab 1 specification & workbooks
3	Spreadsheets: chapters 5,6 & 8	Lab 2 specification & workbooks
4	Spreadsheets: Macros and VBA	Lab 3 specification & workbooks
5	HTML and CSS	Lab 4 specification & workbooks
6	More HTML & CSS, Forms and JavaScript	Lab 5 specification
7	Revision Session (1h)	Mid-semester Exam
8	Access: chapters 1 & 2	Lab 6 specification
9	Access: chapters 2 & 3	Lab 7 specification & databases
10	Access: chapters 7 & 4	Lab 8 specification & databases
11	Access: Chapters 6 & 9	Lab 9 specification & databases
12	Access: Chapter 10	Lab 10 specification & databases
13	-	Lab 11 specification & databases

Resources for Students

Details are below for many of these - follow the links:

- Text Book. The textbooks provide detailed reference material on functionality available Access and Excel.
- The reference books provide further detail.
- Lecture Notes can be accessed, as they become available The lectures provide a guide to, and exposition of, the course material. The lecture notes provide a fairly comprehensive summary of what is said in the lectures, additional comments may be made in lectures that are not covered in the lecture notes, *and you are responsible for finding out about anything extra that was said in lectures, if you happen to miss the lecture.*

- Laboratory Classes. A theoretical understanding of the material is not enough: to get a firm hold on the course material, you need hands-on experience. The lab classes provide this.
- Your lab computer (or your own computer): experimentation with Excel, Access, etc. is a good way to learn, and is perhaps the *only* way to consolidate what you have learned.
- Your fellow students - get to know them and talk to them - because they, like you, are committed to learning about web, spreadsheets and databases, they can help you to learn, and, by doing so, they will help clarify concepts for themselves. Just remember to stay on the right side of the plagiarism rules, when discussing assignments.
- The class forum - which potentially has contributions from both staff and students is accessible via the course web page;
- Staff consultation sessions
- The UNSW Library - go and find what it has to offer!
- ... and of course there's the web :-)

Map of CSE Laboratory locations

Text Books

- Text book: Grauer, Mulbery, Poatsy: *Microsoft Office Excel 2010 Introductory.* Pearson Education, 2011. Four Excel chapters, about 300 pages.
- Text book: Grauer, Mast, Poatsy: *Microsoft Office Access 2010 Introductory.* Pearson Education, 2011. Four Access chapters, about 300 pages.

The new edition should be available in the UNSW Bookshop by start of semester as a shrink-wrapped 'value pack' containing both books.

Recommended Reference Books

Recommended books for the course include:

- Recommended*: Grauer, Mulbery, Poatsy: *Microsoft Office Excel 2010 Comprehensive.* Pearson Education, 2011. Eleven Excel chapters: about 650 pages.
- Recommended*: Grauer, Poatsy, Mast, Hogan: *Microsoft Office Access 2010 Comprehensive.* Pearson Education, 2011. Ten Access chapters: about 635 pages.
- Recommended: Lehnert, Kopec: *Web 101* (3rd edition). Pearson Education, 2007.

* Be aware that the Comprehensive edition is a superset of the Introductory edition for both of the Grauer et al. books. In more detail, the content of the Introductory edition consists of the "Office Fundamentals and File Management" chapter, plus the first four chapters of Excel/Access material. So it doesn't make much sense to have both versions. Of course, the Comprehensive editions are more expensive. However, they *are* more comprehensive. And heavier...

Software

You can use Access and Excel in the CSE workstation laboratories (where you will be running them within Windows XP running under VMWare Fusion, see above). In fact, you will have to use these versions in your lab classes. Being able to run Microsoft Office software on a home computer is obviously an advantage, though. If you do work on your home computer, be aware that there may exist subtle differences between different versions of Office 2010. The versions running in the School laboratories are definitive for the purposes of assessment. That is, if your Excel or Access document works at home but not in the School labs, then for the purposes of assessment, it doesn't work. :-(

Mac Users: There is a 2011 (Mac OSX) version of Excel but not of Access. If you have a Macintosh and want to use Access, your best course of action appears be to obtain one of the multi-boot applications for the Mac, such as Boot Camp, Parallels, or VMWare Fusion, then install some version of Windows on this, then install the Windows version of Office 2010 inside this.

There are definitely differences between Mac Excel 2011 and Windows Excel 2010 - see warning in the first paragraph of this Software section.

School of Computer Science and Engineering (CSE) Laboratory Opening Hours.

Course Evaluation and Development

COMP1000 is evaluated by survey using the CATEI system. The survey includes stock questions asked of all comparable courses, so that it is possible to compare the delivery of COMP1000 with other relevant UNSW courses, and also a space for free-format comments. You cannot be identified from your survey response, unless you deliberately include identifying information in your free-format comments. The completed survey forms are analysed statistically by someone independent of the delivery, and the results, including the free-format comments, are made available to staff involved in the course *after* grades have been reported and released. The comments and statistics reported are used to improve the course, and the lecturer is required to summarise the survey results for the Head of School and Associate Dean Academic.

The previous CATEI evaluation indicated that students wanted to shorten the lecture times and have more practice time. While at this stage this is very hard to change, we will attempt to use the last session of each lecture to go through a practical exercise from start to finish. For this purpose, students are encouraged to bring their laptops and go through the exercise with the lecturer.

Other Matters

- Students enrolled in COMP1000 are expected to attend all classes
- The use of School of Computer Science and Engineering computing laboratories is subject to rules described in the Yellow Form, which you acknowledge (electronic) receipt of when you receive your computing account. The Yellow Form also outlines what to do in case of illness or misadventure that affects your assessment, and supplementary examinations procedures within the School of Computer Science and Engineering.
- Occupational Health and Safety, and Ergonomics (safe use of computers). To find out about UNSW policies in these areas, go to the Yellow form section on OH&S, which has links to the latest edition of these policies. The most immediate area of concern for CSE students is ergonomics and repetitive strain injury. See the CSE OHS & Ergonomics pages.
- UNSW Equity and Diversity Policy Statement
  UNSW Student Equity and Disabilities Unit