LONDON SOUTH BANK UNIVERSITY

Module Guide

Software Development For Business

BIF_4_SDB

The latest copy of this unit guide is to be found on the module site on Blackboard.

Faculty of Business

2011/2012

Level 4

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Module Details

Module Title:	Software Development for Business
Module Level:	4
Module Reference Number:	BIF-4-SDB
Credit Value:	20
Student Study Hours:	200 Hours
Contact Hours:	75 Hours
Private Study Hours:	125 Hours
Pre-requisite Learning (If applicable):	None
Co-requisite Modules (If applicable):	None
Course(s):	All Undergraduate Computing streams
Year and Semester	2011, Semester 1
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Subject Area:	Software Development
Summary of Assessment Method:	In-Lab Development

Short Description

Software Development skills are widely valued, not least in the world of business. The skills needed to develop systems, requires not only that you understand the problem fully, but you can work with different technologies, selecting the most appropriate for the task in hand. What is certain is...

The only way to learn Software Development

is by developing software.

Many of the skills acquired in the module are needed later in your course. You will learn of development tools and approaches to solving problems. The more you can take with you from this module into the future the more you will enrich your later learning.

This module aims to begin the ground-work for your future success. How we do it is written in bold characters above.

Aims of the Module

The module aims to make the basic concepts of software development familiar to you. To show you that there may be different ways to achieve the same commercial goal. To make you aware if the process of developing solutions to common business problems.

Three areas of development are introduced, some which you may be familiar, others you may not. HTML5 with CSS3, Spreadsheet Development and programming using Python. In the limited time available we can only deliver a taste of the power of each environment but you should have sufficient exposure to know if one or more of them are areas you would like to study more in the future.

The development is in the context of Business applications, but the aim is to help you acquire more general concepts and skills that will help you in many different situations.

Learning Outcomes

Knowledge and Understanding. *You will be able to:*

- describe the common elements in programming languages and their purpose and interaction
- describe the functions of the elements of a software development environment
- describe the conventions for the presentation of code
- describe the purpose and use of a design notation

Intellectual Skills. *You will be able to:*

- read and interpret requirements
- solve problems and express the solutions in appropriate notation
- interpret test results in the context of requirements
- search help files for appropriate components

Practical Skills. *You will be able to:*

- design and write simple software to implement given specifications
- describe how a program works to achieve its requirements
- apply and record given test cases to a program
- locate and correct errors in your programs
- document your programs to a given standard
- use built-in components

Transferable Skills. *You will be able to:*

- keep a log of your activity at an appropriate level of detail
- make realistic evaluations of the quality of your work
- manage your time
- organise documents on various storage device

Assessment of the Module

Assessment is through 2 practical lab tests.

Assessment occurs in week 6 (HTML and Spreadsheets) and again in week 12 (Python). These assessments will be open-book, in particular, you will be allowed to bring along a reflective log-book with notes and reflections made from all the lectures, tutorials and lab sessions. You will not be allowed to use electronic versions without special permission.

Week 13 may provide an opportunity for those who do poorly on the first attempt, but these will have the scores capped.

Please note, If you have not done the preparatory work your log-book, or you do not bring your log-book with you, it is likely that you will fail this unit.

Feedback

Feedback will normally be verbally provided to students during labs/tutorials. Where necessary, mark sheets will provided to break down the feedback into separate parts.

The log-book is a student managed, on-going piece of work on which feedback will be provided when presented by the student in the lab sessions

Introduction to Studying the Module

Overview of the Main Content

There are 3 main topics being addressed in this module with so little lime that they can only be considered to be light introductions to the technologies, never the less, there is a significant amount to learn in what time we have.

HTML5 and CSS3 – This is a general introduction to HTML and style sheets, but where possible the latest standard will be used. This section will also look at the use of text-processors and FTP, loading files onto a server.

Modelling using Spreadsheets. - This will be based on the Open Source Office package (LibreOffice) which is a very close clone of Microsoft Excel. The focus here is on taking provided data files and using the spreadsheet to generate summary reports.

Programming with Python – This is quite a forgiving programming language that is widely used. The aim here is to deliver the basic concepts common to many programming languages. We aim to reach a point where you can start to do some useful processing by the time you finish this module. We understand that some people have done no programming so we do start at the beginning, but you will have to work at it!

Overview of Types of Classes

There are 3 types of classes.

> **Lecture** - 1 Hour: Although the slides will be made available, the delivery is not simply reading out the slides. There will be demonstrations and Q&A sessions.
>
> **Tutorial** – 1 Hour: These are sessions where you interact with your tutor, possibly without the use of a computer. Sessions may include design activities.
>
> **Lab** – 3 Hours: These are guided sessions where the aim is for you to learn practical skills and to make notes in your log-book. It is also an opportunity for you to talk through the work that you did between the sessions. (Tutors will sign off your work each week when giving feedback)

Importance of Student Self-Managed Learning Time

Many students will need to study for a substantial time outside of the classroom. In this module you will acquire valuable skills but they might not come easily. Like someone using a Gym, you should not be surprised if you do not develop if you have not done the exercises and put in the time.

Additional studying is an essential part of this module.

Learning Resources

There are study guides and exercises for each week, there will be practice for the assessment and links to on-line tutorials. ALL materials are available on Blackboard

Employability

There is no doubt that the skills and knowledge delivered in this unit are widely valued by many different employers. Applicants to IT jobs without these skills are seriously limited.

The Programme of Teaching, Learning and Assessment

Wk	Content	Activities
1	Introduction HTML5	Design portfolio, Use Text Editor to input HTML
2	Using CSS	Create page from a design, use FTP to put work onto a server.
3	Starting Spreadsheet Modelling	Build simple spreadsheets and learn formulae and functions.
4	Spreadsheets for data analysis and reports	Load data from multiple files, write spreadsheet using data from multiple sheets
5	Catch up week	Practice material for the week 6

		assessment.
6	Starting Python programming (Learning Idle)	Assessment 1
7	Variables types and expressions	Practice Python
8	Conditional statements and simple loops	Practice Python
9	Using functions. A look at some built in objects	Practice Python
10	Using files and other objects	Practice Python
11	Designing solutions + lists vs tuples vs dictionaries	Practice material for the week 12 assessment.
12	Review of Python	Assessment 2
13	Remedial session	Resit Opportunity. (capped)

Student Evaluation

This is the first time that this module has been delivered so there is no student feedback to report this year.

Learning Resources

Core Materials

HTML/ CSS –
`http://www.w3schools.com/html/` *this also links to HTML5*
`http://www.w3schools.com/css/` *this also links to CSS3*

Spreadsheets –
`http://www.libreoffice.org/get-help/documentation/`
`http://www.tutorialsforopenoffice.org/category_index/spreadsheet.html`

Python –
`http://www.sthurlow.com/python/` *this covers version 2.4*
`http://en.wikibooks.org/wiki/Non-Programmer%27s_Tutorial_for_Python_3.0`
`http://docs.python.org/tutorial/` *this covers version 2.7*

There are many other internet resources and these will be documented on Blackboard

Optional Materials

If you feel you must have a book

"Python Programming for the Absolute Beginner" , Michael Dawson, 3rd Ed, Cengage Learning, 2010. is not bad
or "**Python Pocket Reference**" Mark Lutz is small enough to keep with you

Unless you can already program, I would suggest you stay away from
"Core Python programming", Wesley. J. Chun 2nd Ed, Prentice Hall, 2007
"Head First Python" Paul Barry
"Programming Python, Second Edition By Mark Lutz