

BN2226 – ADVANCED SPREADSHEET SYSTEMS

Module Number: BN2226
Module Title: Advanced Spreadsheet Systems
Number of Aston Credits: 10
Total Number of ECTS Credits: 5
(European Credit Transfer)

Staff Member Responsible for the Module:

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Availability: Appointments can be made online
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or with group administrator, John Morley, ABS266, Extension 3236

Other Staff Contributing to the Module:

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Availability: Appointments can be made online
<https://wass.aston.ac.uk/wass/pages/loginpage.php>
or with group administrator, John Morley, ABS266, Extension 3236

Pre-Requisite(s) for the Module: BN1160 Information Technology for Business

Module Learning Outcomes:

Upon successful completion of the module students will be able to:

1. Demonstrate knowledge of the characteristics of successful spreadsheet systems and the process of specifying, designing, developing, implementing, and maintaining such systems.
2. Produce a specification, design and other appropriate documentation for a spreadsheet system

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3. Write appropriate code using Visual Basic for Applications to produce a bespoke spreadsheet application using Microsoft Excel.
4. Test Spreadsheets applications conformance to specification and for system validity and produce suitable documentation of this process.
5. Be able support others in developing IT skills

Module Content:

Design and implementation features of business systems.

Fundamentals of Microsoft Excel spreadsheet programming from single-key macros to fully button, menu and user-form driven systems using Visual Basic for Applications.

The following weekly breakdown is indicative and is likely to be modified in the light of student needs.

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|---------|---|
| Week 1 | Introduction to spreadsheet systems design and different spreadsheets including Google spreadsheets and Microsoft Excel |
| Week 2 | Developing House styles and Specifications for spreadsheets |
| Week 3 | Revision of use of Excel and an introduction to advanced use including array formula, conditional formatting, and data protection. Using formula to sort and extract data |
| Week 4 | Interactivity and the user of graphs and charts |
| Week 5 | Recording macros, introduction to Visual Basic for Applications (VBA). User interface design, adding controls to worksheets and user forms. The MsgBox and Inputbox functions |
| Week 6 | Introduction to Userforms |
| Week 7 | Initialising and saving values from userforms to protected worksheets |
| Week 8 | Event handling in User forms for validation and initialisation. Use of global variables. |
| Week 9 | Altering the appearance of Excel. Defining and redefining toolbars and menus. Automatic procedures and event handling |
| Week 10 | Testing spreadsheets |
| Week 11 | Hand-in spreadsheet portfolio |

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International Dimensions:

World leading Excel Spreadsheet package is used.
Language and cultural issues are discussed as part of the definition of house styles and spreadsheet specification.

Corporate Connections:

The individual task is to develop a spreadsheet which allow comparison of different energy providers for domestic supply.
Example spreadsheets will be drawn from appropriate situations from both public and private sector organisations.

Links with Research:

The use of Wiki's, forum and formative self and peer assessment is an active research area for Dr G Simpson

Learning and Teaching Rationale and Methods:

Students attend one lecture and one computer workshop (each lasting one hour) per week. In addition they are expected to work on the spreadsheet application for the coursework, examine example spreadsheet systems and use relevant supporting materials. Students are to support each other's learning posting in discussion forums and Wikis and commenting on each other's work in peer assessment tasks.

The lecture is to provide an overview of key concepts, processes and techniques. The workshop is used in the initial weeks to demonstrate specific spreadsheet techniques and subsequently as forum for obtaining help on the coursework. Students are expected to help each other by identifying common difficulties they would like the lecturer to address, and by sharing the solutions that they find themselves. Students will also follow structured tasks which they will submit for assessment by their peers and so receive regular feedback on their progress.

Contact and directed learning

Lectures	11 hours
Computer Workshop	11 hours

Indirect learning

Individual work on Coursework	50 hours
Helping each other develop spreadsheets skills	11 hours
Further Reading and Study	17 hours

Total **100 hours**

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Ethical Approval:

This module does not require any primary research and no ethical approval will be necessary.

Assessment and Feedback Rationale and Methods

The learning outcomes are the development of technical skills and abilities in the design, production and testing of spreadsheets along with the ability to support and train others in acquiring such technical skills. Hence the assessment is 100% coursework based through the submission of a portfolio of evidence to demonstrate the successful acquisition of these skills.

The students will submit a spreadsheet, with supporting documentation to demonstrate their attainment of learning outcomes 1 to 4.

They will also demonstrate outcomes 3 to 5 by a portfolio of forum posts, wiki contributions and participation in peer assessment, together with user testing of another student's spreadsheet.

Breakdown of marks for portfolio

Specification	10 %
House style	10 %
Spreadsheet System	45 %
Documentation of own testing.	10 %
Peer assessment of Specification	5%
Peer assessment of House Style	5%
Contributions to Wiki pages	10%
Contribution to Discussion Forum	5%