**Liverpool** John Moores University

Title: COMPUTING FUNDAMENTALS
Status: Definitive
Code: **3001FCERT**    (103120)
Version Start Date: 01-08-2011

Owning School/Faculty: Computing and Mathematical Sciences
Teaching School/Faculty: Computing and Mathematical Sciences

| Team | emplid | Leader |
|---|---|---|
| Andrew Symons | | Y |

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|---|---|---|---|---|---|---|
| **Academic Level:** | FHEQ3 | **Credit Value:** | 36.00 | **Total Delivered Hours:** | 108.00 |
| **Total Learning Hours:** | 360 | **Private Study:** | 252 | | |

**Delivery Options**
Course typically offered: Standard Year Long

| Component | Contact Hours |
|---|---|
| Lecture | 36.000 |
| Practical | 36.000 |
| Tutorial | 36.000 |

**Grading Basis:** 40 %

**Assessment Details**

| Category | Short Description | Description | Weighting (%) | Exam Duration |
|---|---|---|---|---|
| Portfolio | AS1 | Portfolio | 100.0 | |

**Aims**

*To introduce the student to the area of computer systems*

*To introduce the student to the concepts involved in computer programming*

*To introduce the student to the software development process*

**Learning Outcomes**

After completing the module the student should be able to:

1. Describe the basic architecture and components, both hardware and software of a computer
2. Manipulate and translate base 10 and base 2 number systems
3. Use Boolean logic  truth tables and simple logic gate circuits.
4. Use a source code editor and compiler (both IDE and at the command line)
5. Use a programming language to develop simple computer programs
6. Describe the basic software design constructs of Sequence, Choice and Iteration and use them to develop simple programs

## Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

CW          1   2   3   4   5   6

## Outline Syllabus

*Computer Systems Architecture*
  *Hardware*
  *Software*
*Numbers and Logic*
  *Number Systems*
  *Boolean Logic*
*The Operating System*
  *Graphical User Interface and Command Line Interface*
*IDE's and Editors*
*Programming Concepts*
  *Variables (through use of spreadsheets)*
  *Sequence, Choice and Iteration*
*Programming Design and Practice*

## Learning Activities

Theory oriented lectures followed by tutorials and where applicable lab-based practicals

## References

| Course Material | Book |
| --- | --- |
| Author | |
| Publishing Year | 2005 |
| Title | Computer Science An Overview |
| Subtitle | |

| Edition | 8th |
|---|---|
| **Publisher** | Addison-Wesley |
| **ISBN** | 0321247264 |

**Notes**

This module introduces the student to the fundamental concepts of computer science and its practical application