

## Liverpool John Moores University

Title: PROGRAMMING (IN C)  
Status: Definitive  
Code: **4024TECH** (105418)  
Version Start Date: 01-08-2011

Owning School/Faculty: Engineering  
Teaching School/Faculty: Engineering

| Team       | Leader |
|------------|--------|
| Tony Moore | Y      |

**Academic Level:** FHEQ4      **Credit Value:** 12.00      **Total Delivered Hours:** 48.00  
**Total Learning Hours:** 120      **Private Study:** 72

### Delivery Options

Course typically offered: Semester 2

| Component | Contact Hours |
|-----------|---------------|
| Practical | 24.000        |
| Seminar   | 24.000        |

**Grading Basis:** 40 %

### Assessment Details

| Category | Short Description | Description   | Weighting (%) | Exam Duration |
|----------|-------------------|---|---------------|---------------|
| Essay    | AS1               | Coursework : Simple applications                          | 40.0          |               |
| Essay    | AS2               | In class test: Test knowledge of programming fundamentals | 20.0          |               |
| Essay    | AS3               | Coursework: Programming project                           | 40.0          |               |

### Aims

*To introduce the student to the basic principles of programming in a high level language. To familiarise the student with most features of the C programming language.*

## Learning Outcomes

After completing the module the student should be able to:

- 1 Write simple programmes using C or a similar language.
- 2 Interact with the operating system.
- 3 Produce a software application to solve a technical problem.

## Learning Outcomes of Assessments

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

|    |   |   |   |
|----|---|---|---|
| CW | 1 |   |   |
| CW | 1 | 2 |   |
| CW | 1 | 2 | 3 |

## Outline Syllabus

*The programming environment.*

*Programming fundamentals, data types, variables, assigning properties, programme statements.*

*Conditional statements and constructs.*

*Looping or decision making statements and constructs.*

*Arrays, strings and structures.*

*Functions, file I/O.*

*Bit manipulation.*

## Learning Activities

By a series of seminars and practical sessions. Students will be encouraged to work independently.

## References

|                        |                                       |
|------------------------|---------------------------------------|
| <b>Course Material</b> | Book                                  |
| <b>Author</b>          | Gottfried, B.                         |
| <b>Publishing Year</b> | 1996                                  |
| <b>Title</b>           | Schaum's Outlines: Programming with C |
| <b>Subtitle</b>        |                                       |
| <b>Edition</b>         | 2nd ed                                |
| <b>Publisher</b>       | McGraw Hill                           |
| <b>ISBN</b>            | 0070240353                            |

|                        |      |
|------------------------|------|
| <b>Course Material</b> | Book |
|------------------------|------|

|                        |                             |
|------------------------|-----------------------------|
| <b>Author</b>          | Kernighan, B. and Richie, D |
| <b>Publishing Year</b> | 1988                        |
| <b>Title</b>           | The C Programming Language  |
| <b>Subtitle</b>        |                             |
| <b>Edition</b>         | 2nd ed                      |
| <b>Publisher</b>       |                             |
| <b>ISBN</b>            | 0131103628                  |

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### Notes

This module will introduce the student to the basic principles of programming in a high level language and familiarise the student with most features of the C programming language.