

## Information Engineering and Testing

|                |                                |
|----------------|--------------------------------|
| Module Code:   | COS5027-B                      |
| Academic Year: | 2018-19                        |
| Credit Rating: | 20                             |
| School:        | Department of Computer Science |
| Subject Area:  | Computer Science               |
| FHEQ Level:    | FHEQ Level 5                   |
| Module Leader: | Professor Marian Gheorghe      |

Additional Tutors:

Pre-requisites:

Co-requisites:

### Contact Hours

| Type           | Hours |
|----------------|-------|
| Lectures       | 24    |
| Tutorials      | 12    |
| Laboratory     | 24    |
| Directed Study | 140   |

### Availability Periods

| Occurrence | Location/Period                                 |
|------------|-------------------------------------------------|
| BDA        | University of Bradford / Semester 2 (Feb - May) |

### Module Aims

1. To provide an awareness of the range of Information Engineering Systems (IES) development methodologies.
2. To provide an understanding of using appropriate analysis and design notations, implementation and testing approaches.

3. To provide the opportunity to analyse a real-life IES scenario and implement/test an adequate system.

## Outline Syllabus

1. A review of IES development methodologies.
2. Notations and concepts used in IES analysis and design.
3. The use of rigorous notations in IES specification.
4. Testing methods used in IES projects.
5. Critical analysis of a real-life IES product.
6. Software project management approaches and notations.
7. Implementation of an adequate software system illustrating the use of appropriate methods, notations and tools.

## Module Learning Outcomes

*On successful completion of this module, students will be able to...*

- 1 explain the IES theory, methods and techniques.
- 2 apply the concepts, notations and methods to analyse complex IES products.
- 3 apply analytical and problem solving skills.

## Learning, Teaching and Assessment Strategy

The contact time consists of lectures, tutorials/seminars, laboratories and directed study. Lectures introduce the analysis, design and development methods and techniques which are applied in practical lab sessions. Different approaches to problem solving are explored and discussed in tutorial/seminar sessions. Preparatory reading will be set in advance so that students can prepare for the module.

The course work of the module consists of an individual project with several outcomes, including documents and code. The individual project will be submitted by the end of week 6. The exam will be a closed book type.

## Mode of Assessment

| Type      | Method                    | Description                                                       | Length       | Weighting | Final Assess' |
|-----------|---------------------------|-------------------------------------------------------------------|--------------|-----------|---------------|
| Summative | Examination - closed book | The key concepts, methods and models will be assessed.            | 2 hours      | 50%       | Yes           |
| Summative | Coursework                | Individual projects on the use of adequate IES concepts and tools | 0-2000 words | 50%       | No            |

**Legacy Code (if applicable)**

**Reading List**

To view Reading List, please go to [rebus:list](#).