

Topics/Content outline:

Topics include: analysis of requirements; production of analysis and design documents; development of an advanced level application using an object oriented development environment.

| Expanded Outcomes | |
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| Outcome 1 | <ul style="list-style-type: none"> Applying the principles of object-oriented analysis and design in the system development life cycle for a case study (Range: classes, inheritance, encapsulation, the dynamic creation and destruction of objects, polymorphism, late binding, persistence, information hiding, message passing and interfaces) Determine user requirements and feasibility, applying Object Orientated Analysis and Object Orientated design techniques. |
| Outcome 2 | <ul style="list-style-type: none"> The use of a CASE tool to create UML documentation for a case study. The use of a CASE tool as a System Administrator. The use of a CASE tool as a Project Repository. |
| Outcome 3 | <ul style="list-style-type: none"> The use of common techniques for implementing object-oriented designs in the selected prototyping language. The design of a prototype that requires multiple modules and implements data structures. The development a full test plan and test data for checking the prototype program against its specification. |
| Outcome 4 | <ul style="list-style-type: none"> The use of professional presentation skills to showcase the design solution and prototype for a case study. |
| Outcome 5 | <ul style="list-style-type: none"> Critical thinking techniques to self and peer assess a project. |

Assessment:

| Weighting | Nature of assessment | Learning outcomes |
|------------------|---|--------------------------|
| 15% | Written report on analysis of requirements | 1, 2 |
| 25% | Written report on design of an application | 1,2 |
| 40% | Creation of an object oriented application to meet given requirements | 2,3 |
| 10% | Demonstration of object oriented application and design solution | 4,5 |
| 10% | Written Report on critical thinking techniques and peer assessment | 5 |

Learning and teaching approaches: Lectures, laboratory work, self-directed study.

Learning resources required:

Textbook: refer to the current programme booklist.

Learning resources recommended: