F27SB Software Development 2

COURSE DETAILS
Course Code: F27SB  
Full Course Title: Software Development 2  
SCQF Level: 7  
SCAF Credits: 15  
Available as Elective: No

DELIVERY LEVEL
Undergraduate: Yes  
Postgraduate Taught: No  
Postgraduate Research: No

COURSE AIMS
To impart further techniques of object orientation

To introduce simple data structures and algorithms

LEARNING OUTCOMES – SUBJECT MASTERY

• Understanding and application/ mastery of the object-oriented paradigm  
• Understanding of inheritance and generics.  
• Understand how to produce well designed, i.e. extendable and maintainable, code.  
• Ability to critically evaluate and improve the quality of code.  
• Ability to develop simple state diagrams  
• Ability to design and implement simple graphic user interfaces

LEARNING OUTCOMES – PERSONAL ABILITIES

• Possession of fundamental skills in computer science, applicable throughout the remainder of the degree  
• Understand challenges in developing, designing and maintaining code.  
• Understanding of the importance of regular working habits (pdp)  
• Understanding of the use of chatboards and other devices to learn from and instruct others in the class (pdp)  
• Ability to compare and evaluate the applicability of simple data structures and code design choices to relevant problems (pdp)

SYLLABUS

• Inheritance and Generics: hierarchies, subclasses, polymorphism, static and dynamic type, overriding, dynamic method lookup.  
• Designing classes: coupling, cohesion, abstraction, modularisation, types  
• Abstract classes, abstract methods, interfaces
F27SB Software Development 2

- State machines & state diagrams GUIs: components, layout, event handling
- Error-handling: defensive programming, exceptions, assertions, JUnit tests (?)
- Collection classes

### COURSE RELATIONSHIPS

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<th>Course Code</th>
<th>Level</th>
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### LOCATION AND ASSESSMENT METHODS

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