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

Additional Information:

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

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