CFS/CIS2187 Modelling and Prototyping.

Module Handbook

1. (Indicative) Lecture Programme

Week	Lecture	Tutorial/Practical
1	Introduction	Exercises
2	Scenario Analysis	Exercises
3	Modelling with Activity Diagrams	Exercises
4	Use Case Diagrams	Introduction to UML Modelling Tool
5	Introduction to Objects and Classes	UML Modelling Tool
6	Relationships	UML Modelling Tool
7	Sequence Diagrams	UML Modelling Tool
8	Guidance Week 1	Coursework Support
9	Case Study - Odd Shoe Company	Exercises and Coursework Support
10	Design Objects	Exercises and Coursework Support
11	Intro to Databases	Exercises and Coursework Support
12	Recap/Finish Off Above Topics	Exercises and Coursework Support
--- Christmas Break ---		
13	Introduction to Java GUIs	Java Exercises
14	More Java GUIs	Java Exercises
15	Yet More Java GUIs	Java GUI Builder Exercises
16	Prototyping with Java GUI Builder	Java GUI Builder Exercises
17	Adding GUIs to Domain Objects	Java GUI Builder Exercises and C/W 2
18	Handling Collections of Data	Java GUI Builder Exercises and C/W 2
19	More on Handling Collections of Data	Java GUI Builder Exercises and C/W 2
20	Guidance Week 2	Coursework Support
21	Multi Window GUIs	Coursework Support
22	Active Interfaces	Coursework Support
23	Worked Case Study	Coursework Support
24	Anything Else...	Coursework Support

2. Resources

We will have one lecture and a tutorial / practical each week.

Lecture notes will be placed on the Web (on the Blackboard Virtual Learning Environment).

The weekly lecture will be used to deliver theoretical material and to give examples of the concepts covered.

This will be supported by either a tutorial or a practical each week to allow the concepts and techniques to be put into practice through the use of exercises or support for the coursework.

The practicals will introduce two major software products - a UML modelling tool and a Java GUI Builder for Java prototyping. (At the time of writing this handbook the final decision about which tools to use this year has not yet been made. More details will be provided later.)

3. References / Learning Materials

You should not need any supplementary texts above this web site for the purposes of the course, but much of the material is drawn from:

Software Development with UML, by Ken Lunn, published by Palgrave Macmillan, January 2003; ISBN: 0333985958; copies in the library. This covers the whole breadth of software development at an introductory level, including management, analysis, design, construction and deployment.

For more in-depth understanding of UML, consider:

Schaum's Outline of UML, by Simon Bennett, John Skelton and Ken Lunn, ISBN: 0077096738. This is a very compact and cheap (about £11) summary of the UML language, and you will find it useful for later courses in object-oriented methods.

Further reading on object-oriented analysis and design can be found in

Object-oriented Systems Analysis and Design Using UML, by Simon Bennett, Steve McRobb, and Ray Farmer, published by McGraw-Hill. This book is more academic in style, and covers analysis and design in depth.

The following textbooks are not for the faint-hearted or the poor, but if you want to look beyond the course then consider them:

Booch G, Rumbaugh J, The Unified Modeling Language User Guide, ISBN: 0-201-57168-4, Addison-Wesley, 1999

Jacobson I, Booch G, The Unified Software Development Process, ISBN: 0-201-57169-2, Addison-Wesley, 1999

Jacobson I, Griss M, Software Reuse - Architecture, Process and Organisation for Business Success, ISBN: 0-201-92476-5, Addison-Wesley, 1997

Booch G, Object Solutions: Managing the Object-Oriented Project, ISBN: 0-8053-0594-7, Addison-Wesley, 1996

Rumbaugh J, Jacobson I, Booch G, The Unified Modeling Language Reference Manual, ISBN: 0-201-30998-X, Addison-Wesley, 1999

Jacobson I, Christerson M, Object-Oriented Software Engineering: A Use Case Driven Approach, ISBN: 0-201-54435-0, Addison-Wesley, 1992

Finally, The Object Management Group is the standards group responsible for defining UML. Read about UML and why OMG think it is important. On the left hand side are links to the official UML specification.

4. Assessment Strategy

There will be two assignments, equally weighted, one per semester. More details to follow in week 3 or 4.