CS1004 Information Systems and Organisations
Undergraduate Study Guide for 2015/16

Department of Computer Science

TABLE OF CONTENTS

MODULE DETAILS

Module Leader	Dr Arthur G. Money	
Department	Computer Science	
Credits	20	
Other staff	Dr Simon Kent	
Contact and private study time	Lectures	40 hours
	General Study	160
	Total	200 hours
Assessment	Method	Proportion of marks
	Exam	100%

ACCESS TO SUPPORT MATERIAL AND ADDITIONAL INFORMATION

The majority of the teaching, learning and support material is provided electronically via the University's Blackboard Learn system. Note that the details provided in this study guide are based on the formal module syllabus for this module which sets out the agreed content, learning outcomes, assessment and teaching methods. Module syllabus and scheme of studies documents for your programme of study can be found by looking at Course and Module Data held by Registry.

INTRODUCTION/AIMS/BACKGROUND

The aim of this module is to:

> *Develop understanding of the complex, dynamic, and emergent behaviour of information systems (IS) with particular emphasis on the way these characteristics are modelled in the modern working environment.*

The module will pursue these aims by looking at the subject from two different perspectives. From one perspective you will study what we mean by an information system and how they are woven into our society and organisations. This will cover:

- The nature of "Information" and how it relates to decision making.
- Basic business activities and organisational structures.
- Different sorts of computer based systems to support human activity.
- Working with people, ethics and codes of conduct.

However, simply learning about how organisations use computer systems is not enough. We also need to understand that they are man-made artefacts and that we – IS Professionals – are the people that control how they affect other people's lives. The second perspective in this module looks at information systems through the process of designing, modelling and constructing appropriate artefacts. In particular you will study:

- Traditional and modern methodologies (project organisation)
- Data collection techniques for systems analysis
- Design techniques for modelling interaction with the computer (Use Cases)
- Techniques for modelling states and state changes

This course assumes that you have some notions of how computers are used and that you have some notion of the need to construct explicit programs to control what the computer system does. It is assumed that you have already seen and used computers at home, school or within the community and that this has given you some ideas about what they are and how these can be used.

CS1004 is one part of an integrated level one programme that forms the foundation of all degrees offered at the Department of Computer Science. Although this course will not require you to write computer programs, understanding the notion of algorithms and algorithmic machines is an important concept in understanding how computers can be used to support human activity. In teaching this module it is expected that you will be making similar progress in the other level 1 modules and draw on relevant material from them.

Further notes about the different themes within this module and study materials for each area are given in the Topics section of the Blackboard Learn pages. Information about the structure of the module and the relationship between this module and other parts of your programme are covered in the Background section of the Blackboard Learn pages.

LEARNING OUTCOMES

Whatever module or programme of study you are studying for at Brunel University, there are learning outcomes that you must meet/achieve in order to be awarded the credits, which comprise the module and programme of study. In order to get a pass grade (D- or above) in this module, you must meet these learning outcomes below, that is, you must demonstrate ability to:

LO1:   Demonstrate an understanding of information systems and the concepts and issues underlying them in their organisational and societal contexts, including social, ethical and professional issues.

LO2:   Demonstrate an understanding of the various approaches to developing information systems, their benefits, limitations, and theoretical underpinnings

LO3:   Model basic information systems using appropriate modelling techniques.

Students in the mid-range of ability (grade C) will have a greater breadth of knowledge and be able to demonstrate an understanding of information system development both from the standpoint of design and modelling techniques, and from the broader view of methodology. They should also be able to show a deeper knowledge of information systems in society. Students obtaining the highest grades (A or B) need to show how they can make use of this knowledge by being able to use formal models accurately as abstract tools for describing systems. For a grade A they should also be able to analyse systems in context and predict the behaviour and limitations of the resulting structure.

METHOD OF TEACHING

This module provides knowledge and understanding about information systems, how they are used and how they are designed. It has no assessed practical coursework elements because you will put the ideas into practice in the group project exercise. The material will be presented through three main routes:

- Lectures (typically between 1 and 2 hours per week)
- Set reading from the text books
- Additional items and self-test material on Blackboard Learn.

The content of each lecture session will vary between delivery of conventional lectures (where the tutor presents material) and classroom exercises (where the tutor leads you through some pencil and paper/computer-based task). The exercises in the classroom, the exercises in the textbooks and the Blackboard Learn tests are designed to help you understand and apply your knowledge. If you are wise you will try to solve these problems for yourself. They are not assessed and it doesn't matter if you get them wrong, nor does it matter if you discuss your solutions with other students or share answers. The important point is to deepen your understanding by trying to use and develop your knowledge. There is a saying that knowledge is power – but this is only true if you know how to use it. The pass standard for this module is based mainly on your learning facts and repeating or recognising them within the examination. However, good grades will require you to understand those facts well enough to use them to analyse and solve problems. Understanding the principles in this module will also help you get better grades in other modules as the course progresses.

LECTURE SEMINAR PROGRAMME

This module runs across both Terms 1 and 2 and the lectures are scheduled as follows (note that topics and schedule are subject to change):

Block	Date and time	Lecture no.	Week no.	Topic	Lecturer
1: Human IS	Weds 23 Sept:09-11am	1:1 EGA	1	Introduction to Info Sys.	AGM
	Weds 30 Sept:09-11am	2:1 EGA	2	Transactions and transaction processing	AGM
	Weds 07 Oct: 09-11am	3:1 EGA	3	Decision making and info quality	AGM
2: Modelling and design	Weds 14 Oct: 09-11am	4:2 EGA	4	Requirements and use cases	RR
	Weds 21 Oct: 09-11am	5:2 EGA	5	A model fit for purpose	RR
	Weds 28 Oct: 09-11am	6:2 EGA	6	ASK 'Maximising your Success at University'	AGM
	Weds 04 Nov	7	7	ASK week	
	Weds 11 Nov: 09-11am	8:2 EGA	8	Data entities (basic data modelling)	AGM
	Weds 18 Nov: 09-11am	9:2 EGA	9	Microsoft Guest Lecture	G.Davies
	Weds 25 Nov: 09-11am	10:2 EGA	10	States and activities	RR
	Weds 02 Dec: 09-11pm	11:2 EGA	11	Revision session - Interactive	AGM
	Weds 09 Dec: 09-11am	12. (13,14,15)	12 - 16	Remedial week (private study /drop-ins)	--
3: Methodology	Tues 12 Jan: 11-13pm	17:4 HWLL001	17	Methodology: Traditional approaches	SK
	Frid 15 Jan: 14-16pm	18:4 HALB223	17	Methodology: continued	SK
	Tues 26 Jan: 11-13pm	19:5 HWLL001	19	Presentations/debate dry runs	SK
	Tues 02 Feb: 10-12pm	20:5 EGA	20	Methodology presentations/debate	SK
	09 Feb	21	21	ASK week	
	Tues 16 Feb: 12-14pm	22:6 LECT E	22	Methodology round-up	AGM
4: Business systems and organisations	Tues 23 Feb: 12-14pm	23:6 LECT E	23	Business organisations and activities	RR
	Frid 05 Mar: 14-16pm	24:7 HALB223	24	Business strategy and Info. Sys. + (E-bus & e-Comm.)	RR
	Tues 08 Mar: 12-14pm	25:7 LECT E	25	Revision session – whole course	RR,AGM
	Frid 17 Mar: 14-16pm	26:7 HALB223	26	Revision session – lab – drop ins	AGM

Please note: Weeks 7 in Term 1 and 21 in the Spring Term are ASK weeks. There are no scheduled lectures, labs, or tutorials during these two weeks. Week 16 is the first week back after the Christmas break.

READING LIST
Core reading list
Essential reading:
- Curtis, G. & Cobham, D. (2008) *Business Information Systems: analysis, design and practice*, 6th Edition, Prentice-Hall, ISBN: 9780273713821

Recommended reading:
- Brookshear, J. (2004) *Computer Science: An Overview*, 9th Edition, Prentice-Hall, ISBN: 0321434455

For this module we expect you to have your own copy of Curtis & Cobham. This book is recommended as core reading for the entire level 1 program and I will give directed reading and exercises on the assumption that you own a copy. The book has exercises or questions to help you review your understanding and borrowing the book once or twice from the library will not give you a chance to study and re-read difficult sections.

The essential reading text above contains review questions and some supplementary reading material addressing specific topics is included in the Blackboard Learn *Topics* pages. Before each session we will expect you to have at least read the relevant sections and attempted the specified preparation.

The *Topic* pages on Blackboard Learn specify advance reading and other guidance as preparation for lecture sessions and we will not produce printed handouts or copies of the slides in advance. These introductory pages also link into a glossary of relevant terminology, which you need to know. As a revision aid, the slides used will be available a day or so after the lecture. If any significant issues are raised in discussion during the classroom session these will be added to the slides posted.

Supplementary Reading
Please note that there is a wealth of material, much of it freely available on the web or in the library. The above are suggestions but you are encouraged to search for and make use of other sources.

It is important that you learn to become self-reliant and able to access and assimilate material for yourself. Many of the topics necessary for this project will not be covered by lectures. Therefore you will need to work through the exercises and guidance material provided in labs, via Blackboard or from your own investigations.

ASSESSMENT
The formal assessment of the module consists of a single examination at the end of the third term. The examination paper will consist mostly of multi-choice questions. The paper is divided into sections and a rough rule of thumb the more sections you get through with most of the answers correct the higher the grade at the end of the module.

To help you prepare for the examination there will be self-test quizzes on the Blackboard Learn pages for each section of this year's paper. The web base includes a *Self-test guide* on the menu and in the *Assessment* section to guide you through using the self-tests and sample examination questions. These are to help you and they do not form part of the formal assessment. However, if you can consistently get good marks on these tests you should have no difficulty passing the module. Practice examination questions will be made available in the *Assessment* section of the web base and answers to these questions will also be made available on line. There is no assessed coursework for this module.

DELIVERABLES AND FEEDBACK - IMPORTANT DATES
There is no assessed coursework for this module. The only assessment deadline on this module is the final examination.

The *Topics* sections of the Blackboard Learn pages are linked to self-assessment quizzes to help you check how well you know the basics from the block. They are not formally assessed but past results show that if you find yourself falling badly behind with the module you are unlikely to do well in the final examination.

ADDITIONAL VITAL INFORMATION
The Computer Science student handbook can be found on the Department's area on the University's Blackboard Learn site (portal). The handbook is a useful source of information for all aspects of your studies, including procedures of how to inform us of problems you are facing with your studies, how to apply for an extension to your coursework, plagiarism, house style for assignments, joint and group work submissions and

other important matters. The Department assumes that you familiarise yourself with this information, so you will need to look at these pages carefully at various times throughout your studies. The Department also operates within the rules and regulations of the University more generally, and you should also look at what are known as 'Senate Regulations' under the University's web pages. These policies and procedures might change from one academic year to another and it is in your own interest to keep yourself aware about them and their possible changes.