DEPARTMENT

OF

COMPUTER SCIENCE AND INFORMATION SYSTEMS

MSc/PGDip

in

Information Systems & Management

COURSE ARRANGEMENTS

2020 - 2021

Contents

Overview of the MSc Information Systems & Management Programme

Important Contacts

Programme Director   Paul Yoo (paul@dcs.bbk.ac.uk)
Admissions Tutor: Paul Yoo (paul@dcs.bbk.ac.uk)
Projects Tutor (DCSIS)   Oded Lachish   (oded@dcs.bbk.ac.uk)
Programme Administrator: Stacey Hine (PGAdmin@dcs.bbk.ac.uk)

Web Presence

Detailed and updated information about the programme is available from the

- programme internet page:

  www.dcs.bbk.ac.uk/study/postgraduate-specialist/msc-information-systems-and-management/

- departmental internet page for current students:

  www.dcs.bbk.ac.uk/current-students/

- programme Moodle page for enrolled students:
  https://moodle.bbk.ac.uk/course/view.php?id=31893

The Moodle Virtual Learning Environment (moodle.bbk.ac.uk) is used to provide detailed information and post announcements about each module on which you are enrolled. It is your responsibility to familiarise yourself with the contents of this booklet as well as the internet pages listed above. You should also consult Moodle and read your College email on a regular basis.

Student Support

In the early weeks of the programme, every student is allocated a personal tutor in the Department of Computer Science and Information Systems (DCSIS), which is the host department. The personal tutor is a member of staff whom students can contact to discuss any problems of a non-academic nature. These may relate to special needs or personal problems that may affect the student's academic performance. The Department also has a disability officer whom students can contact. Academic problems should first be addressed to the lecturer concerned. If the problem is not resolved or it does not relate to a specific module, then the Programme Director should be contacted.

On the College's MyBirkbeck web site,

http://www.bbk.ac.uk/mybirkbeck ,

students can find gateways to much detailed information and advice.

The student support services are easily found at

http://www.bbk.ac.uk/student-services/student-services .

It is expected that students will familiarise themselves with these pages so that they are aware of regulations and the services available.

Another forum for raising issues is the Student-Staff Exchange Committee. Student representatives, who are elected by the students, meet lecturing staff on the programme, once a term, to exchange ideas about the programme. This allows students to communicate their shared concerns in an informal manner, and for the staff to react and respond speedily to address student's concerns when appropriate or to feed concerns to other appropriate forums. Whilst the style is informal and expeditious, minutes of issues are taken and responses and actions are reported to the next meeting.

Studying in two Departments

The MSc in Information Systems & Management is a programme for graduates of information systems, computing, or management focussing on practical aspects of information systems development, modern management topics, and contextual issues of Information Technology. Students who complete this programme will have gained in-depth knowledge, which they will be able to use in:

- Analysis and solution design for problems arising in information systems and in the management of IT;
- Evaluation of technology options;
- Information systems development;
- Technology-driven organisational change;
- Technology-based innovation.

The programme is designed for mid-career professionals in either Management or Computing who will be further empowered by developing new knowledge from both of those domains. Hence the programme is taught mainly in the Department of Computer Science and Information Systems (DCSIS) and the Department of Management (DoM).

The main two Departments (DCSIS & DoM), which are both constituents of the School of Business, Economics and Informatics, currently operate in significantly different ways.

Traditionally the DCSIS has offered 15 and 30 credit modules over two teaching terms (autumn and spring). Some 15 credit modules are taught over both terms whilst some 30 credit modules are taught in one or both terms. In the Summer Term, DCSIS students are offered revision lectures in the first four weeks and examinations normally commence about week 5.

There is an emphasis on problem statement, solution design and implementation in modules taught in the DCSIS and a project or dissertation supervised in the DCSIS will have a 20% assessment of the problem solution proposal which will be required to be submitted on a particular date before the commencement of the Summer Term in which the project or dissertation is to be performed. Students undertaking this kind of project or dissertation are strongly advised to seek acceptance for supervision by DCSIS staff before submitting their proposal essay otherwise they may be arbitrarily assigned a supervisor by the DCSIS projects tutor. Acceptance will normally require some e-mail correspondence and may require an explanatory tutorial which the student must arrange with the tutor. Students taking a non-implementation project supervised in the DCSIS must take the DoM's Research Methods 1 module.

The Department of Management has adopted a practice of three term working in which most modules are examined in the final week of the term in which they are taught or in the first week of the following term. Currently, it is not possible for students to take DoM modules offered in the Summer Term.

The option to take a Dissertation in the Department of Management is no longer available on this programme.

Getting an Award

Full-time students follow taught modules to a credit value of 120 made up of half modules worth 15 credits and full modules worth 30 credits as well as undertaking a 3–4 month project or dissertation worth 60 credits. Part-time students normally follow taught modules to a value of 60 credits in each of the two years and the dissertation component in the second year. All students take one compulsory module:

- Information Systems (IS) (15 credits)

However, you are strongly encouraged to take to the below module although it is now optional.

- Project Management for Informatics (PMI) (15 credits)

Students, known as Management Entry stream students, who enter on the basis of a degree that does not include taught algorithmic programming, are required to take:

- Introduction to Software Development (ISD) (30 credits)

Students choose further modules valued at either 15 or 30 credits, to complete a total of 120 taught credits. It is not permissible to study units to a total of more than 120 credits during registration on the Programme. Modules that are compulsory for some students may be taken by other students as options, subject to other constraints.

Students, who have not taken the module as part of their undergraduate study, may select the following level 6 module. If selected it must be passed at the MSc passing level (50%). Marks from this module will not be included in the calculation of weighted average.

- Database Management (DM) (15 credits)

The following Level 7 options are taught in the Department of Computer Science and Information Systems (DCSIS).

- Project Management for Informatics (PMI) (15 credits)
- Applied Machine Learning (AML) (15 credits)
- Cloud Computing (CC) (15 credits)
- Computer Systems (CS) (15 credits)
- Concepts of Computation (CoC) (15 credits)
- Data & Knowledge Management (DKM) (15 credits)
- Fundamentals of Computing (FoC) (15 credits)
- Internet and Web technologies (IWT) (15 credits)
- Information and Network Security (INS) (15 credits)
- Semantic Technologies (SW) (15 credits)

The following Level 7 options are taught in the Department of Management (DoM)
NB some DoM modules are only offered on alternate years.

- Digital Creativity and New Media Management (DC) (15 credits)
- Innovation: Management & Policy (IMP) (15 credits)
- Innovation Systems, Networks & Social Capital (INC) (15 credits)
- Intellectual Capital & Competitiveness (ICC) (15 credits)
- Principles of Management (POM) (15 credits)
- Research Methods 1 (RMM1) (Compulsory for students attempting non-implementation dissertations) (15 credits)

- Strategic Management (SM) (15 credits)

Please note that the list of optional modules available may vary from year to year, and that choices are subject to timetabling constraints. Some optional modules are not available to Full-time students where the clash with a module which is compulsory for the student. Part-time students are expected to take compulsory modules before optional modules where there is a clash. In no circumstances can students elect to take two modules that are taught at the same time.

Important Dates

Induction

Department of Computer Science & Information Systems: To be confirmed. The Department of Management also run an induction event which is useful to new students on the programme. Details will be advised when they are available.

Induction Venues.

Department of Computer Science & Information Systems: To be confirmed.
Department of Management: To be confirmed.

The induction sessions, which all new students should attend, in the Department of Computer Science and Information Systems, will include a short hands-on introduction to the department's computer systems, college library and other arrangements. It would be helpful if as many students as possible could arrive up to half an hour early for these sessions, to complete some administration e.g. receiving on-line account information. During the sessions, students will be given further guidance for option selection.

Part-time students should have completed an option form before the 1st September.

Term dates

The taught course covers two terms of eleven weeks each for most subjects shown as Term 1 and Term 2 in the timetable below. These may also be referred to as the Autumn Term (1) and the Spring Term (2) The Summer Term is given over to revision, exams and the beginning of dissertations. None of the subjects of this programme are offered in the Summer Term. The term dates for the coming year are:

> Autumn term: Monday 5 October 2020 to Friday 18 December 2020
> Spring term: Monday 11 January 2021 to Friday 26 March 2021
> Summer term: Monday 26 April 2021 to Friday 9 July 2021

Please refer to the below link for the College holiday closing times.

> http://www.bbk.ac.uk/about-us/term-dates

Lectures begin on Monday 5th October in the Autumn term, and on Monday 11th January in the Spring term. Students should attend lectures during term time as shown in the module descriptions. Many lecturers in DCSIS maintain personal teaching pages on the department's own computing facilities but all modules will have a Moodle page on the IT Services facilities. IT Services are responsible for the systems that support College level administration. Extensive use is made of the Moodle facilities. It is important to complete registration as early as possible as this is key to interacting with those facilities of the College which makes every effort to interact with students through current personal technology.

Lecture theatres, class and seminar rooms and laboratories in Birkbeck have RDIF touch-in pads for you to register your attendance of a session with your Birkbeck Identity card. Some contact sessions take place in non-Birkbeck venues and attendance sign-in sheets will be available during those. Please touch-in or sign to show you have attended. If you are going to be absent for a prolonged period, please advise the administrator and programme director, preferably in advance.

Any student who decides to withdraw from the course should inform the Programme Administrator, in writing or by email. Students who simply stop turning up for lectures without formally withdrawing from the course will still be held liable for fees.

Timetables

The timetables provide below are intended to help you understand the structure of the programme and to select options. Use the one appropriate to your attendance mode (Full-time or Part-time) and Entry Stream (Management Entry or Computing Entry).

- Management Entry: for those who have not previously studied computer programming at degree level.
- Computing Entry: for those who have previously studied non-declarative programming at degree level.

You should note that if you do not intend to submit a project that develops a programmed artefact you are strongly advised to take **Research Methods in Management** and use the appropriate "non-Implementation Dissertation" template below. Please note that in no circumstance will you be allowed to study two subjects that are delivered at the same time.

Full Time Management Entry - 1 Year

Level	Module Code	Module Title	Credits	Status
7	COIY059H7	Information Systems	15	Compulsory
7	BUCI021S7	Introduction to Software Development	30	Compulsory
6 / 7		Select 5 modules from available options valued at 15 Credits each (see the list in "Part Time" below)	75	Options
Dissertation Module				
7	BUCI012D7	MSc Information Systems and Management Project	60	Core

Full Time Computing Entry - 1 Year

Level	Module Code	Module Title	Credits	Status
7	COIY059H7	Information Systems	15	Compulsory
6 / 7		Select 7 modules from available options valued at 15 Credits each (see the list in "Part Time" below)	105	Options
Dissertation Module				
7	BUCI012D7	MSc Information Systems and Management Project	60	Core

Part Time – 2 Years				
Year 1 Part Time (maximum credits taken 75)				
Level	Module Code	Module Title	Credits	Status
7	COIY059H7	Information Systems	15	Compulsory
7	BUCI021S7	Introduction to Software Development	30	Compulsory For Management Entry Stream
6 / 7		Select 3 modules for Computing Entry Stream and one module for Management Entry Stream from options in Year 2	45 or 15	Options
Year 2				
		Select options to complete 120 credits		

The options below are indicative and *one* may be substituted by a module consonant with the aims of the programme with the approval of the Programme Director. Note that not all optional modules may be available in any year.

Department of Computer Science and Information Systems Modules

Level	Module Code	Module Title	Credits	Status
7	BUCI041H7	Project Management for Informatics	15	optional but strongly encouraged to take this module in the first year
7	BUCI077H7	Applied Machine Learning	15	optional
7	BUCI029H7	Cloud Computing	15	optional
7	COIY060H7	Computer Systems	15	optional
7	BUCI068H7	Concepts of Computation	15	optional
7	COIY061H7	Data & Knowledge Management	15	optional
7	COIY058H7	Fundamentals of Computing	15	optional
7	COIY063H7	Internet and Web Technologies	15	optional
7	BUCI040H7	Information and Network Security	15	optional
7	COIY062H7	Object-oriented Design and Programming	15	optional
7	BUCI031H7	Programming Paradigms and Languages	15	optional
7	COIY060H7	Search Engines and Web Navigation	15	optional
7	COIY053H7	Semantic Technologies	15	optional
6	COIY028H6	Database Management (cannot be taken with COIY061H7 Data and Knowledge Management)	15	optional

Department of Management Modules

Level	Module Code	Module Title	Credits	Status
7	MOMN001H7	The Creative Industries: Theory and Context Part 1	15	optional
7	MOMN061H7	Digital Creativity and New Media	15	optional
7	MOMN043H7	Innovation: Management & Policy	15	optional
7	MOMN042H7	Innovation Systems, Networks & Social Capital	15	optional
7	MOMN038H7	Intellectual Capital & Competitiveness	15	optional
7	MOMN010H7	Principles of Organisational Management	15	optional
7	MOMN011H7	Research Methods 1		Strongly advised if the final dissertation is not a Computing Implementation
7	MOMN082H7	Strategic Management	15	optional

Term	Day	Start Time	Finish Time	Module	Compulsory	Credits	Notes
1	Mon	18:00	21:00	INS		15	
1	Mon	14:00	17:00	ST		15	
1	Mon	18:00	21:00	POM		15	DoM
1	Tue	18:00	21:00	PMI	recommended for all	15	
1	Tue	18:00	21:00	ICC		15	DoM
1	Wed	18:00	21:00	IMP		15	DoM
1	Wed	18:00	21:00	FoC	for all PT students	-	
1	Wed	19:30	21:00	IS	for all PT students	-	continues in T2
1	Thur	13:30	15:00	IS	for all FT students	15	MAL404-405
1	Thur	18:00	21:00	DKM		15	MAL404-405
1	Thur	15:30	17:00	FoC	for all FT students		MAL404-405
1	Thur	18:00	21:00	AML		15	
1	COC	18:00	21:00	CoC		15	
1	Fri	13:30	17:00	AML		15	
1	Fri	18:00	21:00	ISD	for management entry students	30	total 30cr over two terms
1	Fri	18:00	21:00	RMM	if taking non-implementation project	15	FT instance (except Management Stream)
1	Thur	18:00	21:00	SM		15	DoM
2	Fri	18:00	21:00	CC		15	MAL109
2	Tue	18:00	21:00	IWT		15	MAL404-405
2	Mon	18:00	21:00	DM		15	
2	Wed	13:30	17:00	CS	for all FT students	15	
2	Wed	19:30	21:00	IS	for all PT students	15	
2	Wed	18:00	21:00	FoC	for all PT students	15	
2	Wed	18:00	21:00	INC		15	
2	Thur	15:30	17:00	FoC	for all FT students		
2	Thur	13:30	15:00	IS	for all FT students	15	MAL404-405
2	Thur	18:00	21:00	CS	for all PT students	15	
2	Fri	18:00	21:00	DC		15	DoM
2	Fri	18:00	21:00	ISD	for management entry students	15	total 30cr over two terms

The times at which modules are offered are shown in the table above.

Students should advise the Postgraduate Administrator of the modules they intend to attempt as early as possible so that they may be enrolled onto modules. All students must take Information Systems and Project Management for Informatics and will be enrolled onto these in their first year. If you are a "Management Entry Stream" student, you will also be enrolled onto Introduction to Software Development.

Part-time students may attempt up to 90 credits in a single Academic year, but this is ill-advised, and students are strongly advised to balance their studies normally taking 60 credits in each of two years. It is not permissible to take more than 120 taught credits over the course of the programme.

You may select any modules as options shown in this Programme Booklet including those which are not compulsory for your stream i.e. Computing Entry Stream students may take ISD as an option.

Compulsory modules must be taken before optional modules where the schedule allows.

Syllabus and reading lists

Lectures aim to introduce the key concepts of each module. The specific objectives of each module and the principal readings are shown in the Moodle pages for the instance of the module that you will be enrolled on. The reading lists for individual modules given in this handbook are indicative – lecturers will specify, usually at the first lecture, whether specific books should be purchased for particular modules.

Students can contact lecturers outside the classroom to discuss the material. They can contact them via email either to discuss a problem or to make an appointment. Lecturers' contact details are given on the Departments' web sites.

Several modules require students to submit coursework as part of the assessment. Such coursework must always be the student's own work, except where group activities are explicitly stated. The Department and College have strict guidelines and penalties associated with plagiarism and collusion, and routinely submit students' work to plagiarism detection services.

More details are in the section on "Plagiarism" of this booklet.

Compulsory modules (for all students)

Information Systems

Aims

The primary aim of the module is to describe enterprise information systems (EIS) and to set out the considerations and approaches used to implement (deploy) these systems in the business enterprise.   This covers predominantly the Systems Development Life Cycle (SDLC) and the various methodologies used to formalise it, including waterfall and agile approaches, with particular emphasis on the Scrum method.   In the course of this module students are introduced to a range of topics relevant to EIS deployment and the SDLC, including object-orientation, the Unified Process and Universal Modelling Language (UML), enterprise architecture and technical architecture.

Alongside describing the SDLC, students will be introduced to practical aspects associated with a career as an IS professional, and social and organisational aspects of enterprise computing.   This will include topics such as Intellectual Property, Digital Surveillance, Data Privacy and Ethical issues in computing.

Content

The module describes approaches, processes, methodologies and techniques commonly used for large-scale information systems development. It covers the systems development life cycle (SDLC), including project initiation, analysis, design and implementation, addressing key aspects and techniques at each stage. Project methodologies are described, with an emphasis on the Scrum methodology. The module also incorporates insights into professional and legal issues associated with EIS development.

Module Convenor

Brian Gannon

Assessment

By 2-hour written examination and practical coursework, weighting 80% and 20% respectively.

Online material

http://moodle.bbk.ac.uk/

Syllabus

Introduction to Enterprise Information Systems (EIS)

SDLC, IS project methodologies and the Unified Process

Unified Process – Planning & Analysis

Scrum I – Process, Roles, Activities & Ceremonies

Scrum II – Artefacts & Concepts

Enterprise Architecture & Technical Architecture

EIS Implementation and Operation

GDPR, Freedom of Information & Intellectual Property Rights, Contracts & Business Planning

Computer Misuse, Digital Surveillance, Ethical Issues in Computing

Reading

Multiple sources including various academic papers.   Also, various textbooks including:
- Essential SCRUM, Rubin, Addison Wesley, NJ 2013
- A guide to the SCRUM body of knowledge, 3rd edition, VM Education, AZ 2016
- Systems Analysis and Design with UML, Tegarden, Dennis, & Wixom, 5th edition, Wiley
- Professional Issues in Information Technology, Bott, 2nd edition, BCS, 2014

Project Management for Informatics

Aims
The module will develop students understanding of Project Management issues in Informatics.
Students will understand the key issues surrounding Project Management and Project Management practice in Information systems projects. Students who engage with the module will be aware of current issues in Informatics Project Management and have the opportunity to develop confidence in assessing, presenting and discussing those in seminars.

Module Convenor
David W. Wilson

Assessment
2-hour written examination (80%) ; Seminar Presentation and participation (10%) and Essay (10%)

Online material
http://www.dcs.bbk.ac.uk/~dave/teaching

Syllabus
Project Management and the SDLC
Estimating for Informatics projects
Scheduling and resourcing
Current practice in Large Information Infrastructure Projects
Project Human Resource Management
Critical Path and PM Tools
Agility in Project Management

Recommended Reading
Lecturer prepared notes.
Academic papers as advised by the module convenor.
Cadle & Yeates Project Management for Information Systems, 5th edition Pearson ISBN 9780132068581

Compulsory module (for Management Entry Stream)

Introduction to Software Development

Prerequisites
None. However, students should work through the first chapter of the course text - see recommended reading.

Aims
The main aim of this module is to allow students who hold a first degree in a subject other than computing to gain understanding of solving computational problems and of the software development process, which are fundamental to the study of information systems and Information Systems & Management.

The module covers the principles of designing, implementing and testing programs, with a specific focus on object-oriented design. The module explains the fundamental aspects of these techniques utilising a series of practical lab sessions. Students will be able to apply this knowledge in learning new programming languages, developing software systems, and managing software development projects within given time constraints.

Module Convenor
David Weston

Assessment
By 2-hour written examination and practical coursework, weighting 75% and 25% respectively.

Online material
http://moodle.bbk.ac.uk/

Syllabus
The software development process.
Principles of programming and programming languages.
Solving computational problems (problem decomposition, abstraction, sequencing, branching, iteration).
Classes, objects, variables, values, types, arithmetic operations, control expressions, methods, string manipulation, exceptions, arrays, collections, documentation.
Designing, implementing and testing programs.

Reading
Python for Everyone, 2nd Edition by Cay S. Horstmann and Rance D. Necaise, John Wiley Sons; 2016, ISBN: 978-1-119-05655-3 (Course text)
Practical Programming: An Introduction to Computer Science Using Python 3 by Paul Gries, Jennifer Campbell, and Jason Montojo, Pragmatic Bookshelf; 2013, ISBN: 978-1937785451

Python Programming for Beginners by Jason Cannon, CreateSpace Independent Publishing Platform; 2014, ISBN: 978-1501000867

Python for Kids: A Playful Introduction to Programming by Jason R. Briggs, No Starch Press; 2012, ISBN: 978-1593274078

Think Python by Allen B. Downey, O'Reilly Media; 2012, ISBN: 978-1449330729

Learning Python by Mark Lutz, O'Reilly Media; 2013, ISBN: 978-1449355739

Optional module Level 6

Database Management

(Students who have a first degree in computing or relevant equivalent knowledge and experience should consider taking the Level 7 module, Data and Knowledge Management. Students may not select both of these modules.)

Aims

To familiarise students with the main concepts underlying database management, and in particular with the relational database model which is the dominant database system used within corporate IT departments.

The course has three main strands:
(1) Fundamental concepts introduced using the Entity-Relationship model,
(2) Querying a relational database, and
(3) Relational database design.

Module Convenor
Peter Wood

Assessment
By 2-hour written examination and practical coursework, weighted 80% and 20% respectively.

Online material
http://www.dcs.bbk.ac.uk/~ptw/teaching/DBM/index.html

Syllabus
Entity Relationship Model
Relational Model
Querying a Relational Database
Updates, Views and Transactions
Integrity Constraints in the Relational Model
Relational Database Design
Normal Forms
Query Processing
Non-Relational Databases
SQL Programming and the Web

Reading
J.D. Ullman and J. Widom, A First Course in Database Systems, Third Edition, Prentice Hall, 2008.
A.B. Silberschatz, H.F. Korth and S. Sudarshan, Database System Concepts, Sixth Edition, McGraw-Hill, 2011.
T. Connolly and C. Begg, Database Systems: A Practical Approach to Design, Implementation, and Management, Fifth Edition, Addison-Wesley, 2010.

Optional modules Level 7 DCSIS

Applied Machine Learning

Aims
This module covers the fundamental concepts and techniques of applied machine learning using Python and how to use the existing tools to analyse data. Students develop the hands-on and practical skills needed for applied machine learning including the use of existing Python libraries and tools (e.g. Scikit-Learn and Keras) and the use of the techniques needed to analyse data (e.g. pre-processing, feature selection and classification). The module will use Python the most popular machine learning language to solve practical problems based on use cases extracted from real domains such as financial forecasting and computer vision.

Module Convenor
Paul Yoo

Assessment
Coursework (30%) and written examination (70%)

Online material
http://moodle.bbk.ac.uk/

Syllabus
Introduction to Python for machine learning

Preparing data

Feature selection for machine learning

Evaluation and resampling

Rule-based algorithms: decision tree and random forest

Regression-based algorithms: logistic regression and neural networks

Deep learning

Real-life case studies

Recommended Reading
Géron, Aurélien. Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow: Concepts, Tools, and Techniques to Build Intelligent Systems. O'Reilly Media, 2019.

Cloud Computing

Prerequisites
Good knowledge of programming would be necessary. Students who did not have much experience in this area before joining their respective MSc programmes should have taken the ISD (BUCI021S7) module before enrolling on this module.

Aims
This module aims to introduce back-end cloud computing techniques for processing "big data" (terabytes/petabytes) and developing scalable systems (with up to several million users). We focus mostly on MapReduce which is presently the most accessible and practical means of computing for "Web-scale" problems, but will discuss other techniques as well.

Learning Objectives
On completion of the module, students will

1. understand the emerging area of cloud computing and how it relates to traditional models of computing;
2. have competence in MapReduce as a programming model for distributed processing of big data.

Module Convenor
Dell Zhang

Assessment
A couple of programming assignments, weighting 20%.
A 2-hour written examination (unseen), weighting 80%.

Syllabus
Introduction to Cloud Computing
Cloud Computing Technologies and Types
Big Data
MapReduce and Hadoop
Running Hadoop in the Cloud (Practical Lab Class)
Developing MapReduce Programs
Data Management in the Cloud
Information Retrieval in the Cloud
Link Analysis in the Cloud
Beyond MapReduce
Selected Case Studies
Advanced Topics in Cloud Computing

Online Material
http://www.dcs.bbk.ac.uk/~dell/teaching/cc/

Reading
Jothy Rosenberg and Arthur Mateos, *The Cloud at Your Service*, Manning, 2010.
Jimmy Lin and Chris Dyer, *Data-Intensive Text Processing with MapReduce*, Morgan and Claypool, 2010.
Extensive use is made of other relevant book chapters and research papers that are distributed or provided online.

Computer Systems

Aims
To learn the basics of computer architecture and organisation, and the role and mechanism of operating systems.

Module Convenor
Szabolcs Mikulas

Assessment
By 2-hour written examination and coursework, weighting 90% and 10% respectively.

Online material
http://www.dcs.bbk.ac.uk/szabolcs/compsys.html

Syllabus
Introduction: Computer Architecture and Operating System overview
Processors
Processes and threads
Concurrency
Memory management
I/O and file systems
Protection and security
Distributed and parallel processing

Reading
Textbook:
W. Stallings, Operating Systems, Internals and Design Principles, Prentice Hall, 5th edition, 2005, or 6th edition, 2008

Recommended reading:
W. Stallings, Computer Organization and Architecture: Designing for Performance, Prentice Hall, 7th edition, 2006
A.S. Tanenbaum, Modern Operating Systems, Prentice Hall, 2nd edition 2001, or 3rd edition, 2008

Concepts of Computation

NB This module is mutually exclusive with Fundamentals of Computing. Students may select only one or the other.

Aims

To provide students with the basic mathematical and algorithmic tools of Computer Science.

Module Convenor

Oded Lachish

Assessment

Examination (90%) 5 Moodle Quizzes (10%)

Syllabus

Numbers from the digital computer point of view (Binary, Hexadecimal, 2s Complement, Floating Point, Integers)
Binary Logic and Boolean Circuits
Sets and the universal and existential quantifiers
O–notation and the important complexity classes
Pattern matching and sorting
Binary search
Graph algorithms such as Breadth First Search, Depth First Search, Dijkstra's algorithm
State machines and regular expressions
Basic probability
Histograms

Recommended Reading

David Makinson, Sets, Logic and Maths for Computing. 2012, Springer
Seymour Lipschutz, Marc Lipson. Schaum's Outline of Discrete Mathematics. 3rd ed 2009

Data and Knowledge Management

Pre-requisite
A first degree in Computing or relevant equivalent knowledge and experience. (Students who do not meet this criterion should take Database Management – students may not take both of these modules)

Aim
To study the principles and application of data and knowledge management technology.

This module covers the principles and application of data and knowledge management technologies and languages including SQL. Students study the use of these in leading commercial database management systems as well as emerging approaches to data management.

Module Convenor
  Nigel Martin

Assessment
By 2-hour written examination (90%) and practical coursework (10%).

Online Materials
http://www.dcs.bbk.ac.uk/~nigel/teaching/dkm/

Syllabus
Database management software: origins and objectives.
The relational model: algebraic and logical foundations.
Relational algebra and calculus.
SQL: data manipulation, host language support for SQL.
Transaction management: recovery, concurrency.
Relational database theory: dependencies, normal forms.
SQL data definition, other features.
DBMS architectures and implementations.
DBMS storage and indexing.
Query optimization.
Enhanced database capabilities: procedural extensions to SQL, database triggers, deductive databases.
Non-relational DBMS, Object databases, NoSQL databases.
Distributed databases, architectures, query processing.
Databases and the Web, JDBC, alternative persistence frameworks, databases and XML.
Database research topics.

Reading
R. Ramakrishnan, J. Gehrke, *Database Management Systems* (3rd ed.), McGraw Hill, 2003, ISBN 0-07-246563-8.
Students will also be directed to Web resources on the subject.

Fundamentals of Computing

NB This module is mutually exclusive with Concepts of Computation. Students may select only one or the other.

Aims

Discrete mathematics, mathematical logic, and the related fundamental areas of data structures and algorithms lie at the heart of any modern study of Computer Science. Understanding how computers operate and how to use them effectively and efficiently, in terms of either their hardware or software, involves a number of mathematical concepts.

This module introduces and develops mathematical notions, data structures and algorithms that are used in various areas of Computer Science.

Module Convenor

Michael Zakharyaschev

Assessment

By 3-hour written examination and coursework exercises, weighting 80% and 20% respectively.

Online material

http://www.dcs.bbk.ac.uk/~michael/foc/foc.html
http://www.dcs.bbk.ac.uk/~trevor

Syllabus

Numbers: integer, rational, and real. Numeral systems.
Arithmetic for computers.
Digital logic (combinational circuits).
Elements of set and graph theories.
Finite state machines (automata) and regular languages.
Turing machines.
Data structures: representations and operations.
Lists, trees, forests, binary trees.
Tree traversal and other operations; binary search trees.
Organisation of disk storage; methods of file organisation; B-trees.
Algorithms: design and analysis; algorithmic complexity; space utilisation.
Sorting and searching.

Reading

D. Patterson and J. Hennessy, Computer Organization and Design: The   Hardware/Software Interface. Morgan Kaufmann; 3 edition, 2007.
E. Kinber and C. Smith, Theory of Computing. A gentle introduction. Prentice Hall, 2001.

Information and Network Security

Aims

Information security is about protecting information (and information systems) against unauthorised access and tampering. Avoiding security breaches has a high priority for organisations storing and handling confidential data.

The main aim of this module is to provide broad coverage of the field of information security. This course covers the technical as well as the management side of security in information systems. Despite being an essential part of security, technical methods such as cryptography are not enough to guarantee a high level of security. They have to be embedded into a wider context in order to make them more effective. Users of technology have to understand the underlying principles and follow certain policies to avoid security breaches. This module introduces the fundamental approaches to security engineering and includes a detailed look at some important applications.

Module Convenor

Igor Razgon

Assessment

By 2-hour written examination and practical coursework, weighting 80% and 20% respectively.

Syllabus

Overview of Information Security
Access Control Matrix Model
Security Policies
Social Engineering
Basic Cryptography
Identity Management
Access Control Mechanisms
Confinement
Assurance and Trust
Network Intruders and Intrusion Detection
Firewalls and Malicious Software
Cryptographic Protocol Concepts
Authentication
Key Exchange
Economics of Information Security

Online material

http://moodle.bbk.ac.uk/

Reading

Keith M. Martin, Everyday Cryptography: Fundamental Principles and Applications, 2012,
ISBN 978-0-19-969559-1
Ross Anderson, Security Engineering 2nd edition, John Wiley & Sons, 2008,
ISBN 978-0-470-06852-6
William Stallings, *Cryptography and Network Security* 5th edition, Pearson, 2010,
ISBN 978-0136097044
Matt Bishop, Computer Security: Art and Science, Addison-Wesley, 2002, ISBN 978-0201440997
Bruce Schneier, Applied Cryptography, John Wiley & Sons, 1996, ISBN 0-471-11709-9

Internet and Web Technologies

Pre-requisite or co-requisite

A first module in programming, e.g. Introduction to Software Development.

Aims

To provide students with an understanding of how network protocols work, particularly those used on the Internet, and the ability to present and manipulate information on the World Wide Web, with an emphasis on XML.

Module Convenor

Peter Wood

Assessment

By 2-hour written examination and practical coursework, weighted 80% and 20% respectively.

Online material

http://www.dcs.bbk.ac.uk/ptw/teaching/IWT.html

Syllabus

Introduction to the Internet and its applications
Web languages (e.g., HTML, XHTML, XML, JSON)
Languages for defining Web document types (e.g. DTDs)
Web query and transformation languages (e.g. XPath, XSLT)
Client-side processing (e.g. using Javascript, jQuery)
Server-side processing (e.g. using PHP)
The transport layer (e.g., TCP, UDP)
The network layer (e.g., IP, DHCP, ICMP)
The link layer (e.g., Ethernet, ARP)

Reading

Sas Jacobs, Beginning XML with DOM and AJAX.   Apress, 2006, ISBN 1-59059-676-5.

James F. Kurose and Keith W. Ross, Computer Networking: A Top-Down Approach (7th edition), Pearson, 2016, ISBN 1-292-15359-8.

Anders Moller and Michael Schwartzbach, An Introduction to XML and Web Technologies.   Addison Wesley, 2006, ISBN 0-321-26966-7.

Semantic Technologies

Pre-requisite
Some familiarity with formal (programming, query, XML, etc.) languages is desirable but not essential.

Aims
- to introduce the theoretical foundations of Semantic Technologies, including the languages RDF/S, SPARQL, the Web Ontology Language OWL;
- to provide the students with practical skills of modelling data using RDF/S, querying RDF triplestores, and building ontologies;
- to overview the current applications of Semantic Technologies in health care, media management, and industry;
- to demonstrate a few standard algorithms for classification of concepts in ontologies.

Module Convenor
Michael Zakharyaschev

Assessment
By 2-hour written examination and by practical coursework. The written examination will have a weighting of 80% and the coursework a weighting of 20% of the final mark.

Online Material
  http://www.dcs.bbk.ac.uk/~michael/st/st.html

Syllabus
1. Introduction to the module. Ontologies in (Computer) Science. Knowledge graphs. Schema.org. Wikidata. Lab: building a Don Corleone family ontology.
2. Is XML a semantic technology? The tree model of XML documents, XML Schema. Querying XML documents, XPath, JSON. Lab: building a pizza ontology.
3. Resource Description Framework (RDF). RDF Schema. RDF/S semantics. Terse RDF Triple Language Turtle. Linked Data. Lab: extracting RDF data from natural language texts.
4. SPARQL Query Language. Querying RDF triplestores. Lab: setting up and querying Apache Jena triplestore.
5. Ontology-based data access (OBDA). OBDA platform Ontop. Lab: setting up ontology-based access to the IMDB database.
6. Requirements for ontology languages. From RDFS to OWL. OWL ontologies.
7. Ontology engineering. OWL ontologies in life sciences and industry. Lab: designing a travel agent's ontology
8. Open vs closed worlds. Reasoning with OWL. Introduction to Description Logic and formal semantics.

Recommended reading
G. Antoniou and F. van Harmelen. A Semantic Web Primer. MIT Press, 2004.
P. Hitzler, M. Kroetzsch and S. Rudolph. Foundations of Semantic Web Technologies. Chapman & Hall, 2009.
P. Szeredi, G. Lukacsy and T. Benko. The Semantic Web Explained. The technology and mathematics behind Web 3.0. Cambridge University Press, 2014.

Optional modules Level 7 DoM

Creative Industries: Theory and Context (part 1)

Description
This module is about management, organisations and creativity in what is now commonly known as the creative industries. These industries are becoming increasingly prevalent in contemporary post-industrial societies and it is now critical to understand their particularities and the management principles and theories that are central to helping us achieve a better understanding of these specific contexts.

This module will introduce you to a range of principles and theories on management and their articulation in the specific contexts of the creative industries. It will also provide you with a better knowledge of these contexts and with theoretical and practical tools to critically analyse them and understand their functioning. The module will lead you to reflect on the notion of creativity and its various articulations in organisations, moving beyond traditional dichotomies between art and commerce to analyse the creative industries as the location of multiple cultural, political and social practices.

Learning objectives
By the end of the module students will be able to:

Identify and evaluate the major theoretical approaches to, and principles of, management and organisation in the context of the creative industries.
Understand and develop a critical understanding of the activities, structures, and processes involved in the management in the creative industries
Develop a critical and reflexive approach to the discourse of creativity in management.
Understand the main contextual issues and the current transformations in the creative industries.
Discuss the social, economic and political contribution of these sectors in various contexts.

Module Convenor
Klaus Nielsen

Recommended reading
Bilton, Chris (2007) Management and Creativity: From Creative Industries to Creative Management. Blackwell Publishing, UK.
Bilton, Chris and Cummings, Stephen (2010) *Creative Strategy: Reconnecting Business and Innovation*. John Wiley & Sons, UK.
Hesmondhalgh, David (2007) *The Cultural industries*. Sage: London.
Townley, Barbara and Beech, Nick (2010) *Managing Creativity: Exploring the Paradox*. Cambridge University Press.

Assessment
By 3000 word essay (60%), Creative Project and in-class presentation (40%).

Digital Creativity and New Media Management

Aims
The aims of this module are to:
Provide a comprehensive understanding of digital convergence, remediation and innovation in terms of theory, method and practice.
Identify key factors for creativity and innovation that propel the structural transformation in the digital economy.
Understand the different analytical frameworks for understanding the transformation of old and new media in the digital economy.
Evaluate different business models and strategies of existing firms and new ventures.

Learning objectives
At the end of this module, students will be able to:
Develop and analyse research questions in the area of digital business strategy and policy issues, and Collect and analyse relevant secondary empirical data.
Evaluate business models and performance of new ventures as well as established firms in the media industry.
Develop critical capacity to carry out case studies and to assess business, policy and research implications.

Module Convenor
Klaus Nielsen

Content
This course will introduce key debates on digital convergence, remediation and innovation, while examining their implications for cultural life and business strategies. In this course, students will appreciate the synergy that exists between different academic disciplines as well as between different functions and hierarchies of the organisation.
Furthermore, students will be encouraged extend their understanding of the interaction between technology, design and strategy to the contexts of communities, cities, nations and the cyberspace. Case studies will be used to facilitate discussions and students will develop their own ideas.

Assessment
Essay 2,500 words (50%); Exam (50%)

Recommended reading

Shirky, C. (2010), Cognitive Surplus: Creativity and Generosity in a Connected Age, Penguin Press HC.
Semple, E. (2012), Organizations Don't Tweet, People Do: A Manager's Guide to the Social Web, Wiley
Sloane, P, (2011) A Guide to Open Innovation and Crowdsourcing: Advice from Leading Experts in the Field. Kogan Page

Innovation: Management and Policy

Aim
The aim of this module is to provide students with a thorough understanding of the central issues of managing innovation in firms as well as of technology policy and its implications for firms, competitiveness and economic development in an international context.

Learning objectives
By the end of this module, the student will be able to understand key issues involved in managing innovation as well as the rationale and the implementation of technology and innovation policy.

Assessment
 Coursework (40%) and Exam (60%)

Module Convenor
Odile Janne

Content
Innovation and knowledge: The importance of innovation, definitions and models, main concepts and analytical tools, the interaction of technology, markets and organisations, the innovating firm in its environment, knowledge as a business resource.

Strategic management of innovation: Corporate competencies for innovation, innovation in technology-intensive industries, collaborative arrangements, patents strategy, multinational company networks, innovation in small firms.

Innovation policy: The economic foundations of technology and innovation policy, innovation policy in a globalising economy, intellectual property rights, business clusters.

Recommended reading
Fagerberg, J., Mowery D.C. and Nelson, R.R. (eds.) (2006), *The Oxford Handbook of Innovation*, Oxford: Oxford University Press.
Tidd, Joe and John Bessant (2013), Managing Innovation: integrating technological, market and organizational change, 5th Edition, Chichester: John Wiley and Sons.

Innovation Systems, Networks and Social Capital

Aims

The aim of this module is to provide students with a thorough understanding of how innovation is related to the management of social relations within the firm as well as inter-firm networks and also linked to educational systems, labour markets, financial markets and other aspects of the broader societal context.

Learning objectives

By the end of this module, the student should be able to apply theories of innovation systems, networks and social capital theories as analytical frameworks for conceptualising innovation processes, innovation management and innovation policy.

Module Convenor

Klaus Nielsen

Content

Innovation systems, theory and applications: new perceptions of innovation processes and interactive learning; systemic approach(es) to innovation; national, regional, local or globalised systems of innovation; application of the innovation system approach in empirical studies; innovation systems and ICT.

Social capital and networks, the firm as a nexus of social relations: the role of social relations in theories of the firm; social capital: theory and applications; corporate social capital: trust, norms and networks; social capital, human capital and other forms of capital; social capital in innovation processes; how to build social capital.

Inter-firm networks, clusters and innovation: markets, hierarchies and networks; the network society: theory and evidence; networks and learning; strategic alliances and other inter-firm networks; innovation in industrial clusters.

Implications for innovation policy: innovation policy and interactive learning in an innovation system; fostering of networks; business-university networks; social capital and innovation policy; lock-in and break-up.

Recommended reading

Edquist, C. and MacKelvey, M. (eds.) (2000): *Systems of Innovation: Growth, Competitiveness and Employment*. Edward Elgar: Cheltenham.

Fagerberg, J. and D.C. Mowery and R.R. Nelson (eds.) (2005): *The Oxford Handbook of Innovation*. Oxford and New York: Oxford University Press.

Field, J. (2003): *Social Capital*. London and New York: Routledge.

Granovetter, Mark. (1973) "The strength of weak ties". *American Journal of Sociology*, 78(6), pp.1360-1380.

Smith, D. (2010): *Exploring Innovation*. London: McGrawHill.

Assessment

A two-hour examination (60%) and a coursework essay of 2000 words (40%).

Intellectual Capital and Competitiveness

Aim
The aim of this course is to provide students with an understanding of such assets and the new managerial challenges they raise for firms. The opportunities for enhancing corporate competitiveness from such intellectual capital has increased in depth and scope, because of the integration of micro-electronics and information and communication technology (ICT) into business practices and organisations. Thus, the competitiveness of e-business is central to the course focus, and e-business here does not merely refer to Internet firms (as in the early days) but includes all services and manufacturing businesses adopting micro-electronics into their operations.

Learning objectives
The course will provide students with a good foundation for understanding the corporate assets of our time. It will introduce a set of analytical frameworks and tools that will help managers, business analysts, industrialists and policy-makers to build and capture the financial and non-financial returns from such intangible assets which in turn will enhance their corporate competitiveness.

Module Convenor
Birgitte Andersen

Content
Intellectual capital, and related intangible assets and intellectual property, are the CAPITAL OF OUR TIME. They are the sources of corporate competitiveness and value creation for services and manufacturing in terms of financial performance, market dominance, technological advantage, dynamic capabilities, and more. Such capital has been getting increased attention from business leaders, policy makers, consultants, business analysts, and academics over the past couple of decades.
On this module, we will explore the following topics:
Getting a Grip on Intellectual Capital and Intangible Assets: What They Are and Why They Matter?;
Profiting from Technological Innovation: Patent Management;
Profiting from Innovation in Creative Expressions: Copyright Management;
Customer Based Intangibles and Market Based Assets: Managing Customer Loyalty and Branding;
The Managerial Challenges of Social Capital;
The Capital Embedded in Organizational Forms and Business Models;
Capitalising on Knowledge: Managing Knowledge Creation and Learning in Organisations; and
Measuring, Valuing and Reporting Intellectual Capital.
On this module, we will explore the following topics:
- Getting a Grip on Intellectual Capital and Intangible Assets: What They Are and Why They Matter?;
- Profiting from Technological Innovation: Patent Management;
- Profiting from Innovation in Creative Expressions: Copyright Management;
- Customer Based Intangibles and Market Based Assets: Managing Customer Loyalty and Branding;
- The Managerial Challenges of Social Capital;
- The Capital Embedded in Organizational Forms and Business Models;
- Capitalising on Knowledge: Managing Knowledge Creation and Learning in Organisations; and
- Measuring, Valuing and Reporting Intellectual Capital.

Assessment
Exam (75%), essay 2000 words (25%) and workshop attendance.

Recommended reading
Amit, R. and C. Zott (2001) 'Value Creation in E-business', *Strategic Management Journal* 22: 4930520
Brooking, Annie (1998) *Intellectual Capital.* International Thomas Business Press.

Principles of Organization and Management

Description
Organisations matter because just about everything that we do occurs within an organization. The broad aim of this module is to give all students, regardless of academic background, an introduction to the ideas, theories, models and values used to make sense of organizations and the way these theoretical insights are applied to understanding different organizational forms and their competitive significance in an era of global competition. The module reviews some of the major contributions to management thought, identifies trends in organizational analysis and management thinking and evaluates theories and research in terms of their usefulness in understanding and improving management practice.

Learning objectives
At the end of this module, you should be able to:
Discuss the major theoretical approaches to contemporary management and organizations;
Discuss the value of management research and its application to practice;
Apply organization theory and management knowledge to diverse organizational settings;
Demonstrate a critical perspective on organization/management theories and practice.

Module Convenor
Horen Voskeritsian

Recommended reading
Clegg, S, M Kornberger and T Pitsis (2011) *Managing and Organizations*. London: Sage.
Grey, C (2005) *A very short, fairly interesting and reasonably cheap book about studying organizations*. London: Sage
Pugh, D and D Hickson (1996) *Writers on organizations*. London: Penguin.

Assessment
Coursework (100%)

Research Methods in Management (Postgraduate)

Aims
To provide students with the necessary knowledge and understanding to critically appraise published research in the field of management;
and,
to give students the necessary skills to design their own research proposal and project.

Learning objectives
At the end of this module the student will be able to:
Critically evaluate academic articles and assess the strengths and weaknesses in the data and methods applied;
Derive research questions for their dissertation;
Establish appropriate research designs and the relevant methods to answer their research questions;
Analyse and present different types of data.

Module Convenor
  Klaus Nielsen

Content
Qualitative research methods;
Quantitative research methods;
and
Philosophy of social science.

Supplementary workshops are offered with computer laboratory sessions using SPSS and introductory statistics. It is expected that students will apply their knowledge of research methods in their dissertations and coursework.

Assessment
Examination (3 hours).

Background reading
If you have not studied research methods before we recommend that you read Collis and Hussey (2009) before the start of the course.   This book provides an introduction to the material covered in the course.   This is an *introductory* text and is pitched at a lower level than the material covered in the course.

Collis J and Hussey R (2009), Business Research: A Practical Guide for Undergraduate and Postgraduate Students, London: Macmillan.

Strategic management

Learning Objectives
By the end of this module, you will be able to:
Think deeply and rigorously and address the fundamental ideas in strategy research and challenges in strategic management (and develop 'the mind of a strategist')
Demonstrate a sound grasp of classical tools used in strategic analysis and to capably apply them to different cases and contexts
Outline the underlying theories on which these tools are based and the academic research from which they have been developed
and
Apply strategic management tools and techniques to real world business situations.

Module Convenor
Aaron Phillips

Content
This module explores the rich and varied field of strategic management and how strategic analysis, strategy formulation and strategy implementation contribute to organisational performance and success. The module will review practically relevant ideas and frameworks that facilitate strategy design and formulation and help you appreciate and assess the work of a 'strategist'.
You will develop a sound grasp of classical tools used in strategic analysis and apply them to different contexts and cases; acquire an appreciation of the underlying theories on which these tools are based and the academic research from which they have been developed; and be required to fully engage with the subject in order to think deeply and rigorously and address the fundamental ideas in strategy research and the challenges of strategic management.

The module is structured in a way to make effective use of lectures and seminar group sessions. Lectures will outline and explore the relevant theories and concepts that underpin strategic management, while seminar groups will provide students the opportunity to develop their strategic thinking skills via the analysis and discussion of business cases and other relevant readings.

Assessment
Coursework 3assignment (40%) Two Hour Written Exam (60%)

Recommended reading
Barney, J. and Hesterly, W. *Strategic Management and Competitive Advantage: Concepts and Cases*. 5th Global Edition, Pearson, 2015.

MSc Dissertation

Aims

In the MSc dissertation, a student will be able to demonstrate his or her skills in organising and completing a task that goes beyond a typical coursework assignment.

That means either

    (i)   planning and undertaking an orderly piece of social science research in an Information Systems & Management context

or

    (ii)   planning and executing a major piece of information systems development work, and presenting also, existing approaches in the problem area (placing the student's own approach in the wider context).

In order that students will make early appropriate choices, there will be a presentation on projects and dissertations during the Project Management for Informatics module in the first term. There will also be presentations by the DCSIS Project Co-ordinator which students are advised to attend. Students are encouraged to come up with their own ideas for dissertations.

A project or dissertation will have a 20% proposal component. In order to arrange supervision for the dissertation, a student should discuss possible dissertations with the Programme Director, Project Co-ordinator or with the lecturer who seems the most appropriate for the topic. Students are accepted for dissertations/projects when a member of DCSIS places the students name on their list of supervised students on the web-page set aside for this purpose. In this event the proposal must be submitted by the submission date which is normally during the Easter recess prior to the performance of the project.

Students intending to take a non-implementation dissertation are strongly advised to take Research Methods in Management1.

Project Co-ordinator; Oded Lachish,

Assessment

Written dissertation proposal (of about 2000-3000 words) and written dissertation report of 8000 - 12,000 words for an Implementation Project plus related technical Appendices or about 10, 000 words not exceeding 16,000 for a Research Dissertation, weighting 20% proposal and 80% report.

NB the word counts here are guidelines, not targets. Students are advised to avoid overly terse writing as well as padding. Normally, appendices containing evidential data or program code in excess of these word counts may be submitted. These should be linked to the flow of the report and will be treated as part of the submission but may not be read in full.

Syllabus

The main part of the module will be undertaken by a student on his or her own (supported by the supervisor). There will presentations in which the students are acquainted with the expectations of a project or dissertation.

Reading

As recommended by the supervisor.

Regulations, Administration and Assessment

General rules governing degree programmes offered in the College are available from "Mybirkbeck" and can be found at

http://www.bbk.ac.uk/registry/policies/regulations

and in particular at

http://www.bbk.ac.uk/registry/policies/documents/CAS-regs-19-20.pdf .

Requirements for the Award of the MSc/PGDip

Taught modules comprise either 15 or 30 credits and are normally mainly assessed by a written exam and, in most cases, by additional coursework. The dissertation module comprises 60 credits and is assessed by the dissertation proposal document (20%) and the dissertation report (80%). For each module, a pass requires at least 50% of the available marks.

Level 6 Optional Modules, which were originally developed as BSc or BA 3rd/4th Year offerings are not included in the weighted average but must be passed at the Masters Level mark, i.e. 50%, if selected.

Most taught module have a written exam. In the DCSIS Examinations are in the Summer Term in the DoM they are in the Term in which they are taught or in the first week of the following term. Up to 30 credits of taught modules which have been failed with a mark above 40% can be compensated, provided the total weighted average mark for the taught modules is above 50%.

To gain the MSc award students must pass taught modules, including all compulsory modules to a value of 120 credits and pass the dissertation or project valued at 60 credits. Whilst enrolled on the programme students may request the award of a Postgraduate Diploma (PGDip) if they have passed all the taught modules, including all compulsory modules, to a value of 120 credits.   A Postgraduate Certificate (PGCert) may be requested by a student who has passed the compulsory taught modules and optional modules to a value of at least 60 credits.

The final grade is computed by taking the weighted average (according to number of credits) of the individual module assessment marks:

- Pass requires at least a 50% weighted average mark
- Merit requires at least a 60% weighted average mark
- Distinction requires at least a 70% weighted average mark and a pass in the project or dissertation at the distinction level.

Academic Declaration

Each piece of submitted work must have a page entitled "Academic Declaration" by the author that certifies that the author has read and understood the sections of plagiarism in the document,

http://www.bbk.ac.uk/mybirkbeck/services/rules/Assessment%20Offences.pdf

It describes College's Policy on assessment offences. Confirm that the work is your own, with the work of others fully acknowledged. Submissions must also be accompanied by a declaration giving us permission to submit your report to the plagiarism testing database that the College is using. **Reports without a <u>Declaration form</u> are not considered as completed assignments and are not marked.**

Late submission

The following is copied from the College's Common Award Scheme Regulations which may be found at

http://www.bbk.ac.uk/registry/policies/documents/CAS-regs-19-20.pdf .

"20.1. Any piece of assessment that is submitted late and for which no application for consideration of mitigating circumstances has been accepted will be awarded a mark of no more than 40% (undergraduate modules) or no more than 50% (postgraduate modules). Where an application for consideration of mitigating circumstances is accepted, the relevant Sub-board of Examiners may, at its discretion, consider the work as if it had been submitted by the appropriate deadline.

20.2. Where an assessment has not been submitted or attended and no application for consideration of mitigating circumstances has been accepted a mark of 0 will be awarded."

Students should note that this includes all coursework including scheduled presentations and dissertation proposals. Where a coursework deadline cannot be met, an evidenced case claiming mitigating circumstances should be submitted via the Programme Administrator. This will be considered by the Advanced Postgraduate Degrees Mitigating Circumstances Committee.

Announcement of Results

The Examination Board meets in July mainly to consider the results of the written exams and coursework, and in November mainly to consider the results of the dissertations and to award degrees.

Shortly after the meeting of the Exam Board you will receive a letter from the Department about your results. Your results and grades will be confirmed officially sometime later by the College on your MyBirkbeck profile.

Please keep the Department notified of any change of residential and e-mail address; the letters sent to you after the Exam Board go to whatever address the Department holds for you. College letters go to whatever address you put on your examination entry forms but, as stated above, your results will also appear on-line in your MyBirkbeck profile.

Students who have not paid their fees are given *no information at all* about their examination results.

Exam Entry

You will be entered for Examinations for modules on which you are enrolled by the Birkbeck Student Information System.

Deferral

In **exceptional cases**, students may be permitted to defer the written exams and/or the dissertation to the following year. They must apply by filling in a deferral form (available from the Programme Administrator) setting out the reasons for wishing to defer. They have to do this before **1 May and by 1st September for the project**. A student who defers an element of assessment has to enter for that element the following year; normally no further deferrals are permitted.

Mitigating Circumstances

A Mitigating Circumstances claim should be submitted if valid detrimental circumstances result in:
- the late or non-submission of assessment;
- non-attendance of examination(s);
- poor performance in assessment.

If a student feels their circumstances warrant consideration by the Board of Examiners they should notify the Programme Director, in writing, in advance, at the earliest opportunity (within 7 days of the assessment deadline or examination) using a **Mitigating Circumstances Claim Form**, which can be downloaded from:

http://www.bbk.ac.uk/registry/policies/documents/MitCircs.pdf

where the policy and procedure are explained.

On the form, students should state whether the circumstances relate to non-attendance at an examination or late submission of an assignment and should include supporting evidence (e.g. a medical certificate giving the nature and duration of any illness). They may inform their personal tutor, in confidence, of any problem they may not wish to disclose in writing. They should also complete late submission of coursework forms. If they discover subsequently that there are circumstances they could not report in advance, these should be notified to the Programme Director in writing as soon as possible. Students should be aware that discussing their claim with a member of staff does not constitute a submission of a claim of mitigating circumstances.

For a claim to be accepted a student must produce independent documentary evidence to show that the circumstances:
- have detrimentally affected their performance/submission/attendance in assessment or will do so;
- were unforeseen;
- were out of their control and could not have been prevented;
- relate directly to the timing of the assessment affected.

In **exceptional cases**, students may be permitted to defer the written exams and/or the project to the following year. They must apply by filling in a Mitigating Circumstances Claim Form pointed to above.
Students have to do this before **May 1st** for exams and by **September 1st** for the project.

A student who defers an element of assessment normally has to enter for that element the following year; usually no further deferrals are permitted. Simply not turning up for an exam or failing to

submit a coursework or project, without permission to defer, will be considered to be the same as failing it, in the sense that it will count as one of the two attempts that you are permitted to make at passing that element.

Further, students seeking deferral or extensions through mitigating circumstances should consult

http://www.bbk.ac.uk/registry/policies .

Re-sitting Elements of the Assessment

One reassessment, and **only one**, is allowed for each element. You may be **reassessed** in a failed coursework, written exam or the project if your marks for that module are below 50%.

Students who fail an assessment and are awarded a reassessment opportunity have their reassessment subject to a *cap* of 50% for the reassessed element. The cap does not apply to a retake of a whole module nor to students with accepted mitigating circumstances.

Reassessment takes place over the summer, with exams taking place in August/September.

For students who do not take the summer reassessment exam (perhaps because of accepted mitigating circumstances) and where the syllabus for the next year has changed, we set a paper that is suitable for resit candidates, providing alternative questions where necessary. Note, however, that we do this only for candidates from the previous year, not from further in the past.

Also note that part-time students need to accumulate at least 45 credits (out of the available 75) in their first year in order to progress into the second year.

Enrolment as a Revision Student or Dissertation-Only Student

Repeat students, i.e., students who have to retake some modules (and are not taking any new modules) will be charged pro-rata based on the number of credits they retake.

Assessment only students, i.e. those students who

- are being reassessed for coursework and/or examinations only

- have deferred their examinations and are not taking any new modules

- have deferred the project and do not require supervision (resubmitting only)

pay a reduced fee that will allow them access to College facilities (Library and workstation rooms).

While deferred students are classed as assessment only they are allowed to attend lectures for revision purposes. They should formally seek the permission of module tutors to ensure classes are not oversubscribed.

Dissertation only students, i.e. students who retake the project with supervision, pay one third of full fees.

Note that

- a student who has to resubmit the dissertation and be reassessed for examination or coursework will be progressed as dissertation only

- a student who has to resubmit the dissertation and also repeat modules will be progressed as repeat and fees are based pro-rata on the number of credits.

Examinations

Exams are scheduled by the College examinations office on specified dates: these are posted well in advance on the College and programme web sites. Students are required to sit their exams at the scheduled time and place at Birkbeck.

Note that examinations are held during the day, so part-time students will have to make arrangements with their employers to take leave of absence.

Assessment offences and Plagiarism

See
http://www.bbk.ac.uk/student-services/exams/assessment-offences
and
http://www.bbk.ac.uk/mybirkbeck/services/rules/Assessment Offences.pdf

for the College Policy on Assessment Offences.

One particular assessment offence **Plagiarism** is defined as "copying a whole or substantial parts of a paper from a source text (e.g. a web site, journal article, book or encyclopaedia), without proper acknowledgement; paraphrasing of another's piece of work closely, with minor changes but with the essential meaning, form and/or progression of ideas maintained; piecing together sections of the work of others into a new whole; procuring a paper from a company or essay bank (including Internet sites); submitting another student's work, with or without that student's knowledge; submitting a paper written by someone else (e.g. a peer or relative), and passing it off as one's own; representing a piece of joint or group work as one's own".

There are many ways of plagiarising the work of others. Some examples are given below:
- Copying chunks of text without using quotation marks and without appropriate acknowledgement; for example, cutting-and-pasting text from website encyclopaedias or online research papers, or copying papers written by students who did a similar dissertation.
- Copying text and making very minor changes, and without appropriate acknowledgement. This is an example of unacceptable paraphrasing.
- Copying a picture or photo from the Internet, without appropriate acknowledgement. If you use images protected by copyright you must also obtain permission from the copyright owner. See the Library for guidance.
- Using another person's numerical spreadsheet, software or results, without appropriate acknowledgement.
- Duplicating your own work, for example by submitting almost exactly the same work for two different assignments, e.g. a piece of coursework and the MSc dissertation.
- Using code developed by another person without acknowledging the original author as the person who developed it.

The College considers plagiarism a serious offence, and as such it warrants disciplinary action. This is particularly important in assessed pieces of work where plagiarism goes so far as to dishonestly claim credit for ideas that have been taken from someone else. According to paragraph 3.2 of the College's "Procedures for Dealing with Plagiarism by Students on Taught Programmes of Study", "a student who knowingly assists another student to plagiarise (for example by willingly giving them their own work to copy from) is committing an examination offence." The College's procedure also identifies various types of plagiarism and is available online at the Registry's web page:

http://www.bbk.ac.uk/mybirkbeck/services/administration/assessment/offences/plagiarism .

According to paragraph 3.2 of the College's ``Procedures for Dealing with Plagiarism by Students on Taught Programmes of Study'':

The College provides learning support for exams and assessments, please see

http://www.bbk.ac.uk/student-services/learning-development

and guidelines on plagiarism

http://www.bbk.ac.uk/student-services/exams/plagiarism-guidelines .

Birkbeck College Resources

Birkbeck Library

Although lectures and computing sessions are essential elements of your course, success in learning depends largely on the reading and research that you undertake. Most items on module reading lists can be found in the Birkbeck and Institute of Education Libraries and it is important that you familiarise yourself with these Libraries as soon as you can. At postgraduate level, you will also be expected to use other libraries during your studies.

The entrance to Birkbeck Library is on the ground floor of the main building in Malet Street. Your College ID card gives you automatic access to the Library. There is no need to register. The opening times of the Library are designed to meet the needs of part-time students in full-time work – see http://www.bbk.ac.uk/lib/ for details of opening hours.

You can borrow up to 15 items and they can be renewed as long as no-one else requests them. Most books can be borrowed for 3 weeks. Some books, videos and DVDs can be borrowed for 1 week. A few items can only be issued for 1 day. There is also a Reading Room Collection with reference access to key course readings.

Please be a responsible Library user. The smooth running of the Library depends on your co-operation. Please renew or return items promptly, especially if someone else has requested them. If you fail to return items on time you will incur fines and your borrowing rights will be suspended. Students who have overdue items at the end of the academic year will have examination results withheld until the items are returned.

You can access a whole host of electronic journals and databases from any PC in College. The majority of resources can also be accessed from outside College with your IT Services (ITS) username and password.

The Library website is at http://www.bbk.ac.uk/lib . As well as giving comprehensive information about the Library's services and collections, you can also:

- Search the Library catalogue, renew your books and place reservations on items that are out on loan.
- Read articles in over 25,000 electronic journal titles and newspapers.
- Search databases to help you find out what has been written about the subject you are researching, including the *ACM* and *IEEE Digital Libraries*, *Business Source Premier*, *Nexis UK* and the *Science* and *Social Sciences Citation Index.*
- Access past exam papers.
- Work through *LIFE* – an online tutorial to help you make the most of the Library.

Birkbeck students can also use a range of other libraries. Students have reference access to most University of London college libraries. In addition, postgraduate students can join the *SCONUL Access Scheme* which allows access to most other higher education libraries with limited borrowing rights.   See the Library web site for more information.

If a book you need is not available in the Library or you require any assistance using the resources or finding information, please ask at the Help Desk.   Telephone: 020 7631 6063.   Alternatively, contact your Subject Librarian, **Aidan Smith**, directly.   Telephone: 020 7631 6062.   Email am.smith@bbk.ac.uk

Birkbeck eLibrary

As well as its physical holdings, the Library has a comprehensive range of e-resources including bibliographic databases (which tell you what has been written on a topic), and electronic journals.

Most of the electronic resources can be accessed from outside the College using your IT Services username and password. If you did not receive this upon enrolment, please ask for them at IT Services reception (Malet Street).

> The LAMP Service (**L**ibr**A**ry **M**aterials by **P**ost) is a subscription based service which enables you to have books and photocopies of articles posted to your home address. You may find it particularly useful if you are not able to visit the library frequently. Birkbeck students with disabilities may be able to join the service for free on the recommendation of the College Disability Officer, Mark Pimm. If you think you may be eligible for free membership, please first contact Mark Pimm in the Disability Office.

The College Library also runs an interlibrary loan service to enable you to obtain copies of books and articles not held in its own collections. As it can take a couple of weeks to obtain copies of requested materials, you are advised to plan ahead in your general reading and essay preparation so as to make use of this facility. Please note: a charge of £1 will be made for each interlibrary loan request received and there is a limit of 10 requests in progress at any one time.

An introduction to the Library and bibliographical skills is timetabled at the start of your course at which you will meet the Subject Librarian who looks after the collection. They will introduce you to the Library and its electronic resources. In addition, the Library has an online tutorial called LIFE (Library Induction for Everyone) which is always available: http://www.bbk.ac.uk/lib/life/ which has a module in it on 'Researching a topic'.

Wellbeing Service

http://www.bbk.ac.uk/mybirkbeck/services/facilities/well-being-service

is made up of the Counselling Service, the Disability and Dyslexia Service, and the Mental HealthService. They provide specialist support to students. You can contact the Wellbeing Service by emailing wellbeingservices@bbk.ac.uk or by calling on 020 7631 6316, where you will be able to speak to one of the Wellbeing Service Administrators. The telephone service opening hours are: Monday to Thursday : 11am-1pm and 2pm-4pm • Friday: 11am-2pm.

The Counselling Service

www.bbk.ac.uk/mybirkbeck/services/facilities/well-being-service/counselling-service

provides assistance to students who are experiencing emotional difficulties which may be impacting upon their studies or overall experience at Birkbeck.

Mental Health Service

Many students experience mental health difficulties at some point in their time at university. Whether you have a formally diagnosed psychiatric condition or other form of mental health difficulty such as anxiety or depression, we encourage you to seek support in your studies. Birkbeck's Mental Health Service

http://www.bbk.ac.uk/mybirkbeck/services/facilities/well-being-service/mental-health-service

At Birkbeck we welcome students with disabilities. We aim to provide all of our students with a study environment that enables them to participate fully in our courses. The Disability and Dyslexia Service
www.bbk.ac.uk/mybirkbeck/services/facilities/well-being-service/disability

can provide advice and support to students with conditions that impact their ability to study, such as:
- specific learning difficulties (dyslexia, dyspraxia, dyscalculia, AD(H)D);
- sensory impairments (blind/partially sighted, deaf/hearing impaired);
- mobility conditions (including RSI, arthritis, neck back and knee conditions etc.);
- medical conditions (e.g. HIV, CFS, diabetes, cancer, chest and respiratory conditions etc.);
- autism spectrum conditions (autism or Aspergers syndrome).

They can provide support during your studies including:
- Your Study Support Plan;
- The Disabled Students' Allowance;
- Access to Learning Fund;
- Charities and trusts;
- Dyslexia screening test;
- Government benefits;
- Personal emergency evacuation plans;
- Pager alert system;
- Rest Room;
- Toilet facilities;
- Car parking;
- Disability and Dyslexia Support in the Library and IT Services.

Career Development

Most students are interested in developing their careers, either within their current field of work or in a completely new direction. The Careers Group, University of London

http://www.thecareersgroup.co.uk/

offers great expertise and experience in working with students and graduates of all ages and at all stages of career development. The Careers and Employability Service

http://www.bbk.ac.uk/careers/careers-service

is our in-house service for enhancing career development and employability throughout your time at Birkbeck, from enrolment through to graduation. There is also Birkbeck Talent, a professional recruitment service aimed exclusively at assisting Birkbeck students to find work whilst studying and after graduation. They work with London's top employers to offer innovative internships, prestigious job vacancies and exciting graduate opportunities. To find out more, visit

http://www.bbk.ac.uk/talent .

Other Resources and Organisations

Birkbeck Student Union

You are automatically a member of the Birkbeck Students' Union, the University of London Union and NUS upon taking up the offer of a place to study at Birkbeck. NUS cards are available online (NUS Extra) or from the Union Office, Malet Street. Application can be made to become a member of the International Students' Association by completing a form that can also be obtained from their shop.

Location and Telephone: Offices on the 4th Floor of the extension building in Malet Street. General Union Office is in Room 456, Tel: 020 7631 6335.   Enquiries: administrator@bcsu.bbk.ac.uk . Visit the website at

http://www.birkbeckunion.org .

IT Services (ITS)

Access to College IT facilities and services is controlled by using a username and password.   IT Services (ITS) usernames and passwords are allocated to registered students of Birkbeck College.

Accepted applicants for undergraduate and postgraduate degree courses will receive details from ITS of the username and password for the purpose of on-line enrolment. Following completion of enrolment, registered students will be able to access the full range of IT services. Details of the allocated email address and an *Overview to ITS for Students* are included in the communication students will receive from ITS.   Please note the account and email address are not operational until the enrolment has been completed, until then the username and password can only be used for on-line enrolment.

Returning students should continue to use the same account they were previously allocated.   If you forget your password, visit www.bbk.ac.uk/its/mycomputeraccount - if you have registered an external email address with the Registry then it may be possible to send you a new password, otherwise you will have to contact the ITS Helpdesk.

You are expected to be familiar with the College Computing Regulations which are available at: http://www.bbk.ac.uk/hr/policies_services/policies_az/computing_regulations

ITS resources include:
- PC workstation rooms
- Wireless network
- Wide range of general office and specialist computer applications
- Web-based electronic mail
- Blackboard Virtual Learning Environment
- Assistive technology facilities
- Training workshops and self-training materials
- Remote access to College electronic resources and services from home or work

You can find out more about these services and others by visiting our website at: www.bbk.ac.uk/its

Your Birkbeck email address will be used for official Birkbeck correspondence so you should check it at least once a week. Alternatively you can forward all email sent to this address to another email address that you do regularly check, instructions on how to do this are on the ITS website.

There is a text message news flash service which enables students to receive free urgent messages from the College via their mobile phones. You are encouraged to subscribe.   Full details are available at: www.bbk.ac.uk/its/services/sms

Students are allocated personal storage space on a networked file server. Files will remain on the server for one year after you leave.

Your ITS username, password and email address will normally remain valid as long as you remain a paid up undergraduate or postgraduate student of Birkbeck College. However, if we have reason to think that the security of an account has been compromised your account could be suspended without warning and you will need to visit the ITS Helpdesk to have it reinstated.

ITS Helpdesk Opening Hours

Ground Floor,   Malet Street Main Building

Term time:	Monday to Friday	9:00am to 8:00pm
Vacations:	Monday to Friday	9:00am to 6:00pm
Tel: 020 7631 6543		Email: **its-helpdesk@bbk.ac.uk**