Module Specification

Module Code   **CII 2350**
Module Title   **INTEGRATIVE GROUP PROJECT 2**

Module Scheme	School of Computing and Engineering, Undergraduate Scheme
School involved in delivery	Computing and Engineering
Name of Courses(s)	BA (Hons) Computing in Business
	BSc(Hons) Business Computing [with specialism]
	BSc Secure and Forensic Computing
	BSc Software Development
	MEng Software Engineering
	BSc Computer Science
	BSc Computing
	BSc ICT [with minor]
Module Leader	Lorraine Gearing
Location	Queensgate
Module Type	Compulsory
Module Rating	Intermediate, 20 credits
Learning Methods	Supervised Learning: 44 hrs
	Unsupervised Learning: 156 hrs
Pre-requisites	CFI2255 Professional Issues & Integrative Project 1 or equivalent
Recommended Prior Study	None
Co-requisites	None
Professional Body Requirements	To be submitted for BCS accreditation once the courses using this module are established.

Module Synopsis

1. To enable the student to experience (research into) and/or (design and development) of Information and Communications Technology applications, in a multidisciplinary group environment.
2. To practice and develop the personal management and organisational skills needed for ICT development and research in a group environment amongst students from diverse backgrounds.
3. To develop an understanding of the professional, legal, ethical and social issues associated with the application of Information and Communications Technology

Outline Syllabus

Working in multidisciplinary groups, students will act as teams of consultants, employed by an ICT company on behalf of a client. The work will involve proposing/researching a novel solution, designing and developing a prototype, preparing production and marketing arrangements and presenting cash flow predictions and assessing financial implications, including developing a Business Plan / Research Report. Data protection and privacy, computer misuse and crime, intellectual property and copyright, software liability and contracts and Internet security issues will be addressed within the scenario where applicable.

Students take turns to act out various roles within the company and benefit from a wide range of experiences and learning new skills, as well as seeing some tasks and skills in a different light. Projects are carefully selected to require innovative thinking and design input taking account of relevant socio-technical and business issues.

Working in groups, students will develop a specified product with the activity divided into three phases over two semesters. The product can be an ICT applications prototype or ICT research report depending on the student's pathway. The three phases are of approximately equal duration and the tasks to be carried out in each phase are as follows:

PHASE 1 Feasibility Study: Produce a feasibility report defining the ICT problem or area of research and the specification of an outline solution along with a plan for the investigative phase of the project. Identify legal, ethical and social issues e.g. quality, standards and security, data protection and privacy, intellectual property and copyright. Forecast the cost of work to be done by the different parts of the team in all phases and to carry out a cost/benefits analysis. Prepare a cash flow forecast and estimates of product cost. Present the Business Plan to the Bank and proposals to the client in a formal meeting.

PHASE 2 Detailed Investigation and Design: Produce detailed models and documentation, divide the work between the development team and identify any critical paths. Identify, produce and demonstrate any products that are required, and to review their success. To submit a formal analysis and design of a product, to meet the requirements of the client, and attend a project review meeting.

PHASE 3 Production and Evaluation: Produce a final detailed specification for approval and produce a plan for testing, evaluation and implementation. Produce a working prototype/mock up for all aspects of the product, prepare as appropriate, test and evaluation plans and walk through reviews. To submit a group report on the proposals, findings, recommendations etc. including final costings, and undertake a presentation to the clients.

Learning Outcomes

1. Knowledge and understanding
 Upon completion of this module, the student will be able to:
1.1   Appreciate the activities involved in all stages of initial product development.
1.2   Appreciate the socio-technical and user requirements and limitations of ICT.
1.3   Understand Planning /Research and commercial management.
1.4   Understand legal, ethical and social issues associated with ICT product development or applications

2. Ability Outcomes:
Upon completion of this module the learner will be able to:
2.1   Take a professional approach to planning a project
2.2   Work co-operatively in a team
2.3   Keep records of group activities.
2.4   Communicate orally.

Assessment strategy
Formative assessment for this module will be the draft submission of the feasibility study with appropriate feedback.

Summative assessment will consist of one individual assignment 20% and group assignment 80% submitted in two parts

Individual Component (Outcome 1.4)
Students will be required to submit a formal essay that addresses professional, legal and ethical issues.

Group Assignment Part 1: Feasibility Study (20%) (Outcome: 1.3)

Part 2: Final report and presentation (60%) (Outcomes 1.1; 1.2; 2.1; 2.2; 2.3; 2.4)
(Group members will be expected to maintain a Weblog of personal and group activities relating to the module. This will contribute towards the distribution of group marks).

Assessment Criteria
The group assignment will be marked on the content and structure of the submitted report, demonstrating an understanding of the situation and how group members identified a solution.
In the individual component, learners must be able to demonstrate a clear understanding of the issues presented.

Learning Strategy

Contact time typically consists of lectures, seminars or studio but is context specific. Student groups are allocated a group tutor to act in an advisory capacity. The groups themselves are student-led. Outline guidance on the tasks involved in each phase will be given but groups must organise themselves in order to complete them.

Formative assessment will be by means of observation of performance within the group by the tutor and also by peer assessment.

The module will make use of C&IT in the following ways: A web-site/blackboard will be used to supplement contact sessions.
APPENDIX

Indicative References

Avison D. and Fitzgerald G. (2003) *Information Systems Development. (3rd edtn).* McGraw-Hill.

Fitzgerald B., Russo N. L., and Stolterman E. (2002) *Information Systems Development: Methods in Action.* McGraw-Hill.

BCS Code of Conduct and BSC Code of Good Practice. www.bcs.org

Lecture and tutorial programme

Note that the teaching and tutorial programme may change as the module progresses. The table below is provisional. You should access the 'Blackboard' module area regularly where any changes to the programme will be announced.

Computer Games Programming students will only take the Second Term lectures and tutorials.

Week beg	Lecture	Tutorials
27/9	Module Introduction	Review MS Project
4/10	Assignment structure	Assignment groups
11/10	Team working	Effective groups
18/10	Project Initiation Document	First draft PID
25/10	Business Processes	Formative assessment PID
1/11	Software Development Lifecycles	Lifecycle review
8/11	Resourcing	Analysis/Technical skills
15/11	*Guidance Tutoring Week*	
22/11	Project Planning/ Network Diagrams	Support for assignment
29/11	Analysis and Design (1)	
6/12	Analysis and Design (2)	
13/12	Why Projects Fail	Back on track
	Christmas	
17/1	*Intro for Comp Games students only*	Feedback session Assignment part A
24/1	Codes of Ethics	Professional issues individual assignment - out
31/1	Professionalism/BCS	Case studies
7/2	Computer Misuse	
14/2	Intellectual Property Rights (1)	
21/2	Intellectual Property Rights (2)	
28/2	Liability and contracts	
7/3	*Guidance Tutoring Week*	
14/3	Internet Issues	Support for major assignment
21/3	Health and Safety	
28/3	Data Protection and Privacy	
4/4	Consultancy and contracts	

Module delivery

Lectures and tutorials

There will be a weekly one-hour attendance lecture, which will be used to introduce a substantive topic. You are expected to read references given in lectures in your own time. The examination assumes that you have read widely. There will normally be a weekly one-hour tutorial/seminar, which will be used to discuss issues raised in the lectures.

Blackboard

The 'Blackboard' system is used as a repository for module materials. Copies of lecture slides, extended lecture notes, assignment guidance, etc, are deposited in the module's area within Blackboard.

Lecture notes are normally issued in advance of lectures, so that you can bring a printed copy of the lecture slides will you to the lecture.

Tutor support

The tutorial periods are the primary occasions when issues arising from the module should be raised with tutors. It may also be appropriate raise issues at the end of lectures.

Email communication

If you contact a tutor by email, please remember:-

- You must provide all the information a tutor will need to be able to respond to your query. As a minimum, you must provide your full name; your student number; the module name and code and be as specific as possible about your query.

- Your message must be expressed in appropriately formal English.

- Do not send tutors messages that raise questions that you should have been able to answer by other means. If you miss something because you were absent from a meeting, or because you have not read a message on a notice board, this is your responsibility. It is not the tutor's responsibility to make good your omissions.

Note that tutors may decline to respond to inappropriate email messages, or may require you to resend them appropriately rewritten.

Assessment strategy

Both formative and summative assessment will be used.
Part one of the group assignment will be given out as a formative exercise that can then be refined for summative submission

Useful Internet sites

A good introduction to and overview of the ethics issues raised in term two of this module is provided by the 'Computer Ethics: Basic Concepts and Historical Overview' page on the Stanford Encyclopaedia of Philosophy site at http://plato.stanford.edu/entries/ethics-computer/ . You should read this as an introduction to the second term lectures.

The most useful, academic website for the 'professional issues' section of the module is http://www.ccsr.cse.dmu.ac.uk. This is the site of a research centre at De Montfort University that specialises in ethics and social responsibility in computing. You will find a variety of resources here, including material on professionalism, privacy, equality of opportunity, legal issues, ethics as a discipline and links to other sites. In particular, if you access http://www.ccsr.cse.dmu.ac.uk/resources/professionalism/codes,
you will find codes of ethics from professional bodies in the UK (including the BCS and the IEE) Europe, America and other places around the world.

The 'Out-Law' site (http://www.out-law.com/) maintained by the Pinsent Masons legal firm provides an excellent summary of relevant UK legislation. You should regard this site as an online textbook for the module.

You will be expected to be familiar with the British Computer Society code and at least one other code, so that in addressing the case scenarios you can comment sensibly on the attitudes/approaches that professional bodies would take in a particular situation. The British Computer Society's website also contains notes and articles that are relevant to the module. The BCS's website address is:-

http://www.bcs.org.uk

Other relevant sites, will be provided with the lecture and tutorial notes in Blackboard.

British Computer Society

BCS GUIDELINES ON COURSE ACCREDITATION: APPENDIX I LEGAL, SOCIAL, ETHICAL AND PROFESSIONAL ISSUES

Courses seeking exemption and accreditation must cover the legal, social, ethical and professional issues relating to information systems engineering. These matters should include the function of professional bodies, including the role of the Society's codes of conduct and practice.

Students should understand the implications of the relevant statute laws which impact on the work of the information systems engineering professional. It should be noted that as new laws are introduced at national and International level and acts are updated, such changes should be reflected in the curriculum.

The course should give students an awareness of external factors which may affect the work of the computer professional. These may vary according to the orientation of the course and the likely destination of students, but examples could include:

- acceptance of responsibility for work which affects the public well-being
- computer security
- principles of management
- industrial relations

Students should not perceive legal, social, ethical and professional issues as peripheral to, or less significant than, technical skills detailed in the syllabus. Topics which are not examined may be seen by students as unnecessary. The Society considers that adequate coverage of legal, social, ethical and professional issues is important in the assessment and examination of exempt or accredited courses and accepts that the requirements may be met in many ways.

Awareness of professional standards, codes of conduct and relevant legislation must not be separated from the practice of designing and implementing systems. Whilst it is appropriate for some of these issues to be addressed in separate modules, it is essential that these topics are integrated into the course and should be referred to in the project.

The relevant legal, social, ethical and professional issues should be specifically detailed in the syllabus, mentioned in directions to students on practical assignments and sandwich placements, and not left solely to the discretion of individual teachers. Whilst legal, social, ethical and professional issues should pervade the course, the central issues of codes of conduct and practice, legislation and ethical standards are important to all information systems engineering practitioners. Thus they should be addressed in core areas of the course rather than in options alone.

In gaining exemption and accreditation, it is expected that all staff demonstrate and maintain high professional standards in their own use and practice of information systems engineering. Membership of a professional body would be one sign of such a commitment. The production and promulgation of codes of conduct for students, the displaying of notices relating to such things as copying software and virus protection are also signs of such a commitment. Encouragement of student membership is also regarded by the Society as a sign of a commitment to professional standards by the teaching unit.