# SYS1032H-2 INDIVIDUAL PROJECT

**LEVEL** **H**

**Credit value** **60** **(ECTS equivalent credit value 30)**

**PRE-REQUISITES AND CO-REQUISITES**

None

**AIMS**

To promote in the student by means of an individual project, the acquisition and application of knowledge in a scientific manner to enable the development of multimedia, network and business systems. To develop strategies which allow the student to understand and practice problem solving with regards to research, synthesis, realization and evaluation. To develop the student's ability for presenting project requirements, analysis and design solutions using oral, written and modelling techniques to a professional standard. To provide the student with a challenge through which they will develop and demonstrate the ability to apply and synthesize the knowledge and skills established throughout the course.

**INTENDED LEARNING OUTCOMES**

Having completed this unit the student is expected to be able to:

1. Critically analyze project requirements applying a rigorous scientific process
2. Effective management of projects and risk and demonstrate awareness of professional standards, legal and ethical issues relating to a creative technology project.
3. Design Modelling to inform decision-making and devise effective strategies and action plans for implementation of a solution
4. Build value, quality and reliability into research activities, design tasks and developed systems
5. Respond effectively to complexity, uncertainty, risks and problems and take appropriate action. Communicate technical information effectively using oral, written and modelling techniques

**LEARNING AND TEACHING METHODS**

Each project is undertaken on an individual basis and is mainly a student centred learning activity. The project tutor will manage the overall co-ordination of final year projects. A member of academic staff will be assigned to each project as the 1st supervisor and will be responsible for guiding and assisting the student primarily in the role of consultant. A 2nd supervisor will be assigned for marking and quality purposes. Other specialist staff will be available in their own capacity as consultants for each individual project. The student will however be expected to identify the need in their project for this consultancy and use it in a professional manner which enhances the quality and results of their project.

The student will be required to maintain a project development record for their project. This will consist of a project log book and a reference folder. The project log book will be used to maintain a record of the student's project development, for example design ideas, implementation, results etc. The reference folder will be used to hold material the student has acquired during their literature searches for example Journal papers, conference papers, web articles etc. The 1st supervisor will monitor the progress of the project by weekly discussion meetings with the student and reference to the student's development record. The development record will form the basis for the dissertation and the exhibition.

*Taught Element*
Students will apply the skills developed within the taught element to their final year project. These skills will be developed through lecture and seminar activities. Skills development will be scheduled to align with the needs of the project as it progresses. The majority of knowledge input sessions will be developed using lectures through the autumn term of the final year. Ongoing seminars will be used to support enhancement of the students' research, design, technical communication and written skills. Discussion of problems faced within typical research and development projects will be used to

emphasize the needs for appropriate responses, attitudes and understanding of the underlying issues.

In summary the following T/L strategies will be utilized:

Lectures: Establishing the basic theory and principles, application of principles, problems and pressures, analysis of situations, discussion of short-falls, complexity, dilemmas and contradictions.

Role Play: Student led group activities, reviews and presentations.

Student-led: Project-focused research and development presentations.

**PROJECT MANAGEMENT**

Students will be invited to attend a placement/project day around Easter time. The project process will be explained during this day session and detailed project guidelines will be published in a student project handbook handed out during the session. The project handbook will clarify the expectations of the project and define the project process, the management structure and the project assessment.

**ASSESSMENT**

Students will submit a project proposal for approval. The project proposal must contain, project title, background to the project, rationale, hypothesis, detailed requirements, and a background literature review. The project proposal will be submitted at enrolment. Failure to submit a project proposal or obtain approval for the project will preclude the student from starting the project. The project is 100% coursework assessed through a series of Final Year Project deliverables.

| ILO | Project Proposal | Project Review | Development Record | Dissertation | Exhibition |
|---|---|---|---|---|---|
| 1 | ✓ | ✓ | ✓ | | |
| 2 | ✓ | ✓ | ✓ | | |
| 3 | ✓ | ✓ | ✓ | | |
| 4 | | | ✓ | ✓ | ✓ |
| 5 | | ✓ | ✓ | ✓ | ✓ |

**Project Proposal:** A 2000 word report that will provide an introduction and justification for the project; a literature review; a methodology and a project plan.

**Project Review:** A 15 minute presentation, which will address the current status of the project. The student will demonstrate all current working aspects of the project and identify problem areas (if any) with the project together with details proposals to over come these problems. The review will address the issue of successful project completion. This presentation will be to the 1st project and 2nd project supervisor.

**Development record:** The development record will be submitted at the end of the April. This will be the students log book journal of the project. This item should have been maintained in a professional manner and show clear evidence of the development of the project which may include signatures from the 1st project supervisor.

**Dissertation:** Two identical copies of the dissertation must be submitted together with a CDROM containing a Word document of the dissertation. This will be submitted with the development record at the end of April. The format for the report will be discussed in detail in the student project handbook.

**Exhibition:** A poster exhibition will be held after the final year examinations during which the student will professionally display and demonstrate their project work at an industry open day to academic staff, other students and industry representatives.

**INDICATIVE CONTENT**

Personal (Intellectual and Transferable Skills)

Creativity and Innovation, Critical Thinking and Problem Solving, Effective decision-making (techniques and mind-set), Personal effectiveness, professionalism, attention to detail, Stress management and how to perform in adverse circumstances, Technical Communication (Design Records, Report Writing, Oral Presentations)

Practical Skills
Research Methodologies, Planning, Risk Management and Uncertainty Management, Forecasting (Technological & Environmental), Specification Writing, Value and Quality Management, Concurrent Engineering, Intellectual Property rights and their exploitation, Product Liability, Quality Management, Commercialization, Configuration and Change Management

**INDICATIVE KEY LEARNING RESOURCES**

**BOOKS**

D. Brandon (2006), "Project Management for Modern Information Systems", Idea Group Publishing, ISBN: 1591406935.
P. Weaver (2004), "Success in your Project A guide to Student System Development Projects", Prentice Hall, ISBN: 0 273 67809 4.
J. Phillips (2004), "IT Project Management: On Track From Start to Finish, Second Edition.", McGraw-Hill/Osborne, ISBN: 0072232021.
J. Sharp, J. Peters and K. Howard (2002), "The Management of a Student Research Project 3rd Edition", Gower, ISBN: 0 566 084 90 2.
C. W. Dawson (2000), "Computing Projects A Student's Guide", Prentice Hall, ISBN: 0-13-021972-x.
Bell, J. (1993). Doing your research project. 2nd edition. Buckingham, Open University Press.

**JOURNALS**

Journal of Creative Behaviour Engineering Management Journal.
European Management Journal International Journal of Technological Management.
Journal of General Management Journal of Management Studies.
Industrial Market Digest European Journal of Marketing.

**WEB-BASED SOURCES**

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