**Liverpool** John Moores University

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| Title: | SOFT SYSTEMS MODELLING |
| Status: | Definitive |
| Code: | **6010COMP** (102980) |
| Version Start Date: | 01-08-2011 |
| Owning School/Faculty: | Computing and Mathematical Sciences |
| Teaching School/Faculty: | Computing and Mathematical Sciences |

| Team | Leader |
|---|---|
| Hulya Francis | Y |

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| **Academic Level:** | FHEQ6 | **Credit Value:** | 12.00 | **Total Delivered Hours:** | 36.00 |
| **Total Learning Hours:** | 120 | **Private Study:** | 84 | | |

**Delivery Options**
Course typically offered: Semester 1

| Component | Contact Hours |
|---|---|
| Workshop | 36.000 |

**Grading Basis:** 40 %

**Assessment Details**

| Category | Short Description | Description | Weighting (%) | Exam Duration |
|---|---|---|---|---|
| Portfolio | AS1 | Portfolio to be completed in weekly workshops throughout the module. | 100.0 | |

**Aims**

*To develop and apply knowledge and abilities in systems thinking.*

**Learning Outcomes**

After completing the module the student should be able to:

1 Develop concepts associated with Systems theory and systems thinking.
2 Apply soft systems modelling techniques to human activity systems.

3 Demonstrate a critical understanding of the philosophical issues associated with soft systems modelling in comparison to hard systems modelling.
4 Appraise the contentions associated with methodological application per se and the resulting ramifications for the practice of systems analysis and design.

## Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

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| Portfolio | 1 | 2 | 3 | 4 |

## Outline Syllabus

*Review concepts associated with Systems Theory. Outline the structure of Checkland's Soft Systems Methodology.*
*Trace the impact of SSM within the discipline of Information Systems and the practice os Systems Analysis and Design. Apply SSM to the modelling of Human Activity Systems. Investigate the implications of using soft modelling techniques. Discover the ramifications for the discipline of contentions associated with methodological applications (the soft versus hard; or the soft embedded with hard dilemma).*
*Develop expertise in applying methodology to a complete problem scenario.*

## Learning Activities

There are no formal lectures for this module. Each session will operate on a workshop type basis and students will be expected to participate in class discussions.

## References

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| **Course Material** | Book |
| **Author** | Checkland P.B., Holwell S. |
| **Publishing Year** | 2002 |
| **Title** | Information Systems and Information Systems |
| **Subtitle** | |
| **Edition** | |
| **Publisher** | Wiley |
| **ISBN** | |

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|---|---|
| **Course Material** | Book |
| **Author** | Checkland, P.B. |
| **Publishing Year** | 1981 |
| **Title** | Systems Thinking, Systems Practice |
| **Subtitle** | |

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| **Edition** | |
| **Publisher** | Wiley |
| **ISBN** | |

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| **Course Material** | Book |
| **Author** | Checkland,P.B. Scholes, J. |
| **Publishing Year** | 1990 |
| **Title** | Soft Systems Methodology in Action |
| **Subtitle** | |
| **Edition** | |
| **Publisher** | Wiley |
| **ISBN** | |

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|---|---|
| **Course Material** | Book |
| **Author** | Stoweel,F.A.(ed) |
| **Publishing Year** | 1995 |
| **Title** | Information Systems Provision: The Contribution of Soft Systems Methodology |
| **Subtitle** | |
| **Edition** | |
| **Publisher** | Mc Graw Hill |
| **ISBN** | |

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|---|---|
| **Course Material** | Book |
| **Author** | Jayoratna, N. |
| **Publishing Year** | 1994 |
| **Title** | Understanding and Evaluating Methodologies |
| **Subtitle** | NIMSAD, A Systematic Framework |
| **Edition** | |
| **Publisher** | Mc Graw Hill |
| **ISBN** | |

**Notes**

This module provides an in depth theoretical and practical study of soft systems modelling techniques. The focus is primarily on effective problem definition and the satisfactory elucidation of system requirements. The implications of methodological applications and of the analyst's actions are made explicit. The module seeks to encourage students to 'look beyond' traditional modelling techniques.

Computer-based information systems are the field of study for information technology, elements of which are sometimes called an "information system" as well, a usage some consider to be incorrect. Overview. The term "information system" has different meanings: * In computer security, an information system is described by three objects (Aceituno, 2004): **Structure: ***Repositories, which hold data permanently or temporarily, such as buffers, RAM, hard disks, cache, etc. ** *Interfaces, which exchange information with the non-digital world, such as keyboards, speakers, scann An information system is any organized system for the collection, organization, storage and communication of information.[3]. Information systems aim to support operations, management, and decision making through inter-relation between data systems and activity systems.[4]. Information systems are a combination of hardware, software, data, procedures, people, and feedback.[5]. Expert systems are computer systems that emulate the decision-making ability of a human expert.[6]. An expert system is divided into two sub-systems: the knowledge base and the inference engine. information system and the role of System Development Life Cycle (SDLC). It will. integrate various aspects of the input & output of the Information System into SDLC. An information system is a combination of five elements human, data, software, hardware and network organized together to convert the given input into output by. processing data into information or it is also said that information system is a system. of organized attributes grouped and worked together as a single unit.Â  CBIS (Computer Based Information System) incorporates following types of. information and support systems at various levels of management. An information. system is a form of information and communication technology (ICT) in which data is. processed using human efforts. â€œInformation systems are combinations of hardware, software, and telecommunications networks that people build and use to collect, create, and distribute useful data, typically in organizational settings.â€[2]. â€œInformation systems are interrelated components working together to collect, process, store, and disseminate information to support decision making, coordination, control, analysis, and viualization in an organization.â€[3].Â  Information systems hardware is the part of an information system you can touch â€“ the physical components of the technology. Computers, keyboards, disk drives, iPads, and flash drives are all examples of information systems hardware. We will spend some time going over these components and how they all work together in chapter 2. Software.