

**Bachelor of Information Technology – BInfoTech**

**Faculty of Business and Information Technology**

## Course Outline

IT5x83

Fundamentals of Software Design and Development

Semester 2, 2016

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**Course Details**

All paper details are as stated in the Information Technology Programme Handbook available on Moodle.    This is a compulsory Level 5 module worth 15 credits..

**Course Prescription**

This paper has two parts. The first part introduces fundamental concepts of software development and design. Systems theory and the need for information systems and software within organisations are covered.  The traditional software development lifecycle, its phases and activities, the products of each phase, and the people involved are described.  Fundamental design principles for interfaces, databases, software and documentation are encountered and students apply this knowledge in assignments.   The second part introduces fundamental programming principles of interface development, and sequence, selection and iteration are introduced.  This part reinforces the ideas introduced in part one with practical experience.

## Aims

To provide students with an understanding of computer software through the study of logic methods, software development and documentation methods and give experience in using simple programming language elements. To understand concepts of systems theory, the stages of the Systems Development Lifecycle, and concepts in systems analysis and design.

## Learning Outcomes

On completion of the paper the student will be able to:

1. Describe how the concepts of systems theory relate to business systems and computer systems.
2. Describe the objectives, people involved, tasks and deliverables of each stage in the systems development life cycle.

3. Apply a variety of logic depiction methods to appropriate simple tasks.

4. Implement depicted tasks in a programming language.

**Lectures and Workshops**

|  |  |  |
| --- | --- | --- |
| **Day** | **Time** | **Location** |
| Monday | 9:00am – 12:00pm | E205 |
| Wednesday | 1:00pm – 3:00pm | E204 |

**Lecturer**

Kevin Shedlock is the lecturer for this paper. Please check the timetable on the office door of staff if you need to see a lecturer. At other times please phone or email to make an appointment. You can also email any problems you have if you prefer.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Office** | **Phone** | **Email** |
| Kevin Shedlock | E207 | 2373103 extn3816 | kevin.shedlock@whitireia.ac.nz |

**Resources**

All assignments and lecture notes will be made available on Moodle whenever possible; however you are expected to take your own notes during the lectures. Books and journal articles on the topics covered in this Paper are available in the Whitireia Community Polytechnic library.

**Moodle**

A Moodle site is used for this paper; students will be taught how to access the site and make use of the facilities available. PowerPoint presentations used in class will be available on the Moodle site. Students are encouraged to make use of the discussion boards, file sharing and virtual classroom facilities on the site especially when involved in group work.

**Recommended Textbooks**

Systems Analysis and Design, Eighth Edition

**Learning hours**

This is a Level 5 paper worth 15 credits. This paper requires 150 student-learning hours (Including class session, Tutorials, Labs, self-directed study outside class, assignments and final exam).

**Assessment**

|  |  |  |
| --- | --- | --- |
| **#** | **Assessment Schedule** | **Weight %** |
| 1 | Assignment 1- Research Report | 30% |
| 2 | Assignment 2 - Web Application project | 30% |
| 3 | Final Examination | 40% |

All assignment work must be carried out in the student’s own time, except where specified in the attached timetable.

**Terms**

To be eligible to sit the final examination all formal assessments must be completed and submitted for marking, 5 lab sheets must be signed off as completed. To pass the paper students must gain 50% or more of the total available marks, with at least 40% of the available marks in the examination

**Extensions**

Extensions for an assessment’s due date can only be granted for the following extraordinary circumstances:

* Sickness – in which case a medical certificate must be presented to the lecturer
* Bereavement – in which case the lecturer must be informed as soon as possible
* Extenuating circumstances – these circumstances must be explained to the lecturer and proof may be required

**Late Assignments**

Further regulations are provided in the BInfoTech handbook.

**Return of marked work**

All assignments will be returned to students for viewing after marking has been carried out. Further regulations are provided in the BInfoTech handbook.

# **Dishonesty during Assessment**

Dishonesty includes:

* Plagiarism
* Collaboration
* Possession of unauthorised material

**Plagiarism**

Plagiarism is defined as not acknowledging a source of information or using other people’s ideas as your own. This includes work that has been copied or adapted from a printed or internet source. When using another person’s work or ideas, you must correctly cite or quote the source using the APA V5 referencing style.

**Collaboration**

Collaboration includes working with another student for or during an assessment without prior approval from the lecturer. It may also include sharing your work or files with others.

**Possession of unauthorised material**

It is regarded as dishonesty if a student is found in possession of any unauthorised material such as books, printed or written paper, electronic material or any other devices (translators, mobile phones, MP3 players etc) that are not permitted during an assessment.

Cases of dishonesty will be regarded as academic misconduct and will have serious consequences, which may include failure of the paper, suspension or expulsion from the course or cancellation of enrolment as a student at Whitireia Community Polytechnic.

The student handbook provides information on policies and procedures that will be followed should dishonesty during assessment occur.

**Timetable** – this is a guide only and may be changed as the course proceeds.

| **Week #** | **Topic** |  |
| --- | --- | --- |
| **Week 1**  **25 July** | *Introduction to course, outline, Moodle,* |  |
| **Week 2**  **1 August** | Business Case Web development |  |
| **Week 3**  **8 August** | Project Management Web development | *Assignment 01*  *Handed out* |
| **Week 4**  **15 August** | Requirements Modelling Web development |  |
| **Week 5**  **22 August** | User Interface Design Web development |  |
| **Week 6**  **29 August** | Data Process Modelling Web development |  |
| **Week 7**  **5 Sept** | Object Modelling/XML Web development | Assignment 1 Due |
| **Week 8**  **12 Sept** | Development Strategies Web development | *Assignment 2 Handout* |
| **Week 9**  **19 Sept** | Systems Architecture Web development, |  |
| **Mid Term Break**  (26 September – 7 October) | | |
| **Week 12**  **10 October** | Systems Implementation Web development |  |
| **Week 13**  **17 October** | Support and Security Financial Analysis Tools Web development | Assignment 2 Due |
| **Week 14**  **24 October** | Revision Week |  |
| **Week 15**  **31 October** | Study Week |  |
| **Week 16**  **7 Nov** | Exam Week |  |
| **Week 17**  **14 Nov** | Exam Week |  |