Module Title: Application Software and Programming Project

Module Code: CMM1311

Module Value: 2.0

Duration: 30 weeks

Class-Contact Hours: Lecture 30 hours.

Tutorial 30 hours.

Laboratory 60 hours.

Assessment Scheme: Continuous Assessment 100%

Module Rationale/Aims:

- to introduce the concept of systems development life cycle;
- to equip students with the basic skills in project planning and costing;
- to equip students with the basic skills in systems analysis and design;
- to equip students with programming skills in using a high-level application development tool and environment to develop business applications;
- to introduce the concept of and techniques in software testing;
- to develop the students' skills in writing software documentation;
- to prepare students for further project work.

Learning Objectives:

Students will be able to:

- demonstrate the knowledge and skills necessary to plan and manage a small software development project;
- apply the basic systems analysis and design skills to produce a specification for a software solution of a business problem set;
- use a high-level application development tool and environment to build a complete but small business application;
- demonstrate the knowledge and skills to test a software;
- demonstrate the knowledge and skills in writing software documentation.

Syllabus Keywords:

systems development life cycle (SDLC), feasibility study, systems analysis, requirements specification, systems design, programming, software development, implementation, operation, maintenance, review, project planning, resources, cost and duration, project planning tool, documentation, application development tool and environment, software testing

Textbooks/References:

Gary B. Shelly, System Analysis and Design (3rd ed.), International Thomson Publishing,1998. Roger S. Pressman, Software Engineering - A Practitioner' s Approach (4th ed.), McGraw-Hill, 1997. (A reference manual to a high-level application development tool.) Chai Wan Computing Course Board Page 2 - 8

Information Systems Development / Network Applications Key Content Area:

Content Lecture Tut/Lab.

1 Introduction to systems development life cycle

a Systems theory

b Stages and activities

2 Introduction to project planning

a Project planning and costing

b Project planning tool: Gantt Chart

3 Introduction to systems analysis

a High-level process analysis

b Data analysis

c Logic specification

4 Introduction to systems design

a Output design

b Input design

c Database design

d Program design

5 Introduction to software testing

a Unit testing

b Testing on interfaces

6 Software Development

7 Documentation

a Program documentation

b System documentation

c User documentation