Title: Introduction to Programming

Abbreviation and Number: CISB110 AB Paper No.: 13-121

School: Business

Department: Computer Information Systems

Credits: 3

Course Sequence: ( ) Fall ( X ) Spring ( ) Fall and Spring

Hours Per Week: ( 3 ) Lecture ( ) Seminar ( ) Laboratory ( ) Studio ( ) Kitchen

( ) Other (Specify)

Pre-requisite(s): CISB106 and MATH163

Co-requisite(s): None

COURSE DESCRIPTION

Students are introduced to fundamental computer programming concepts. Students focus on problem solving, algorithm development, program planning tools and standards and utilise a modern programming language to execute simple programs in a console environment.

SPECIFIC OBJECTIVES

Upon successful completion of this course, students will be able to

1) develop algorithms using flowcharts and pseudocode;
2) distinguish among various programming techniques;
3) develop programme documentation;
4) apply elementary programming concepts to write simple programs;
5) recognise various programme development standards;
6) utilise a console environment to execute given programmes; and
7) debug syntax and logical errors.

COURSE CONTENT

I. Logic Overview
   A. Computer components and operations
   B. Programming process
   C. Data hierarchy
   D. Flowchart symbols
   E. Pseudocode statements

II. Programme Structure
   A. Basic
   B. Unstructured code
   C. Recognition

III. Variables
   A. Declaration
   B. Assignment of values
   C. Capture of input
   D. Usage to produce output
Course Outline

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IV. Documentation and Design
   A. Program
   B. Output
   C. Input

V. Debugging Syntax and Logical Errors
   A. Identification
   B. Correction

VI. Making Decisions
   A. Comparisons
   B. Relational and logical operators
   C. Common errors
   D. Case structure

VII. Looping
   A. Characteristics
   B. Advantages
   C. Counters
   D. Nesting
   E. Common errors

VIII. Program Execution
   A. Start a console environment
   B. Compile and execute
   C. Demonstrate programming logic changes

ASSESSMENT
Assignments 40%
Tests 30%
Final Examination 30%
TOTAL 100%

REQUIRED TEXT

SUPPLEMENTARY READINGS/MATERIALS
Title: Introduction to Programming  
Abbreviation and Number: CISB110


**JOURNALS**
*Essentials of Programming Languages*  
*ML for the Working Programmer*  
*The APL Newsletter*  
*The Journal of Functional Programming*

**WEBSITES**
www.programmerheaven.com  
www.computersciencelab.com