

University of Computer Studies (Thaton)
2024-2025 Academic Year
First Year (B.C.Sc. / B.C.Tech.)
Lecture Plan

CST(SS)-1123 Basic Data Processing

First Semester

Text /Reference Books : Programming Logic and Design Comprehensive, 6th Edition by Joyce Farrell, 2011

Prerequisite : NIL

Credit Unit : 2 ACUs

Periods : 48 periods for 16 weeks (3 periods * 16 weeks) (1 period – 1 hr)

No.	Description	Periods	Note
1.	Chapter 1 An Overview of Computers and Programming	5	
	1.1 Understanding Computer Systems 1.2 Understanding Simple Program Logic 1.3 Understanding the Program Development Cycle 1.4 Using Pseudocode Statements and Flowchart Symbols 1.5 Appendix B - Flowchart Symbols 1.6 Using Sentinel value to End a Program Review Questions Exercises		
	Tutorial - 1	1	
2.	Chapter 2 Working with Data, Creating Modules and Designing High-Quality Programs	6	
	2.1 Declaring and Using Variables and Constants 2.2 Assigning Values to Variables 2.3 Modularizing a Program 2.4 Understanding the Most Common Configuration for Mainline Logic 2.5 Creating Hierarchy Chart 2.6 Feature of Good Program Design Review Questions Exercises		
	Tutorial- 2	1	
3.	Chapter 3 – Understanding Structures	6	
	3.1 Understanding the Three Basic Structures Appendix C Structures 3.2 Using Priming Input to Structure a Program 3.3 Understanding the Reasons for Structure 3.4 Recognizing Structure 3.5 Structuring and Modularizing Unstructured Logic Review Questions Exercise		
	Tutorial - 3	1	
4.	Chapter 4 Making Decision	6	
	4.1 Using Relational Comparison Operators 4.2 Using AND Logic 4.3 Using OR Logic 4.4 Making Selection Within Range 4.5 Understanding Precedence With Combining AND and OR Operators Review Questions Exercise		
	Tutorial - 4	1	
	Test – 1 for chapter 1 + 2 + 3 + 4	1	

No.	Description	Periods	Note
5.	Chapter 5 Looping	6	
	5.1 Understanding the Advantages of Looping 5.2 Using Loop Control Variables 5.3 Nested Loops 5.4 Avoiding Common Loop Mistakes 5.5 Using for loop 5.6 Common Loop Applications Review Questions Exercises		
	Tutorial - 5	1	
6.	Chapter 6 Arrays	6	
	6.1 Understanding Arrays and How They Occupy Computer Memory 6.2 Manipulating And Array To Replace Nested Decisions 6.3 Using Constants With Arrays 6.4 Searching an Array 6.5 Using Parallel Arrays 6.6 Searching In Array For Range Match 6.7 Remaining Within Array Bound 6.8 Using A For Loop To Process Arrays 6.9 Appendix D Solving Difficult Structuring Problems 6.10 Appendix F Two Variations on the Basic Structures—case and do-while The case Structure The do-while Loop Recognizing the Characteristics Shared by All Structured Loops Recognizing Unstructured Loops Review Questions Exercises		
	Tutorial - 6	1	
	Test – 2 for chapter 5 + 6	1	
7.	Chapter 7 File Handling and Applications	3	
	7.1 Understanding Computer Files 7.2 Understanding the Data Hierarchy 7.3 Performing File Operations Review Questions Exercises		
	Tutorial - 7	1	
	Test – 3 Final Test for all Chapters 1+2+3+4+5+6+7	1	
	Total	48	

Assessment plan for the Course

Assignment	- 10%
Quiz	- 10%
Tutorial	- 25%
Tests	- 25%
Final Test	- 30%