

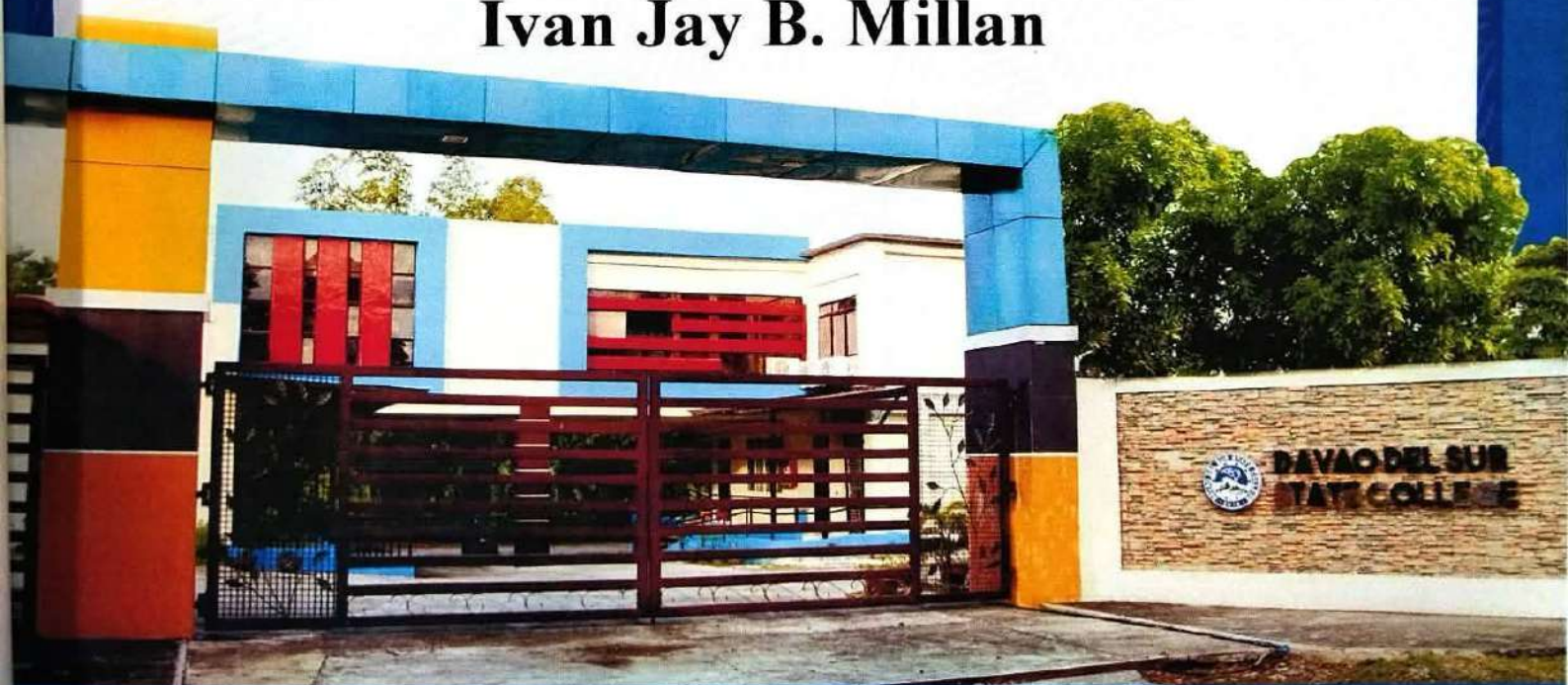


Davao del Sur State College
Brgy. Matti, Digos City, Davao del Sur

Computer Programming I

Version 2.0

Rhea Mae L. Perito, MSIS
Ivan Jay B. Millan



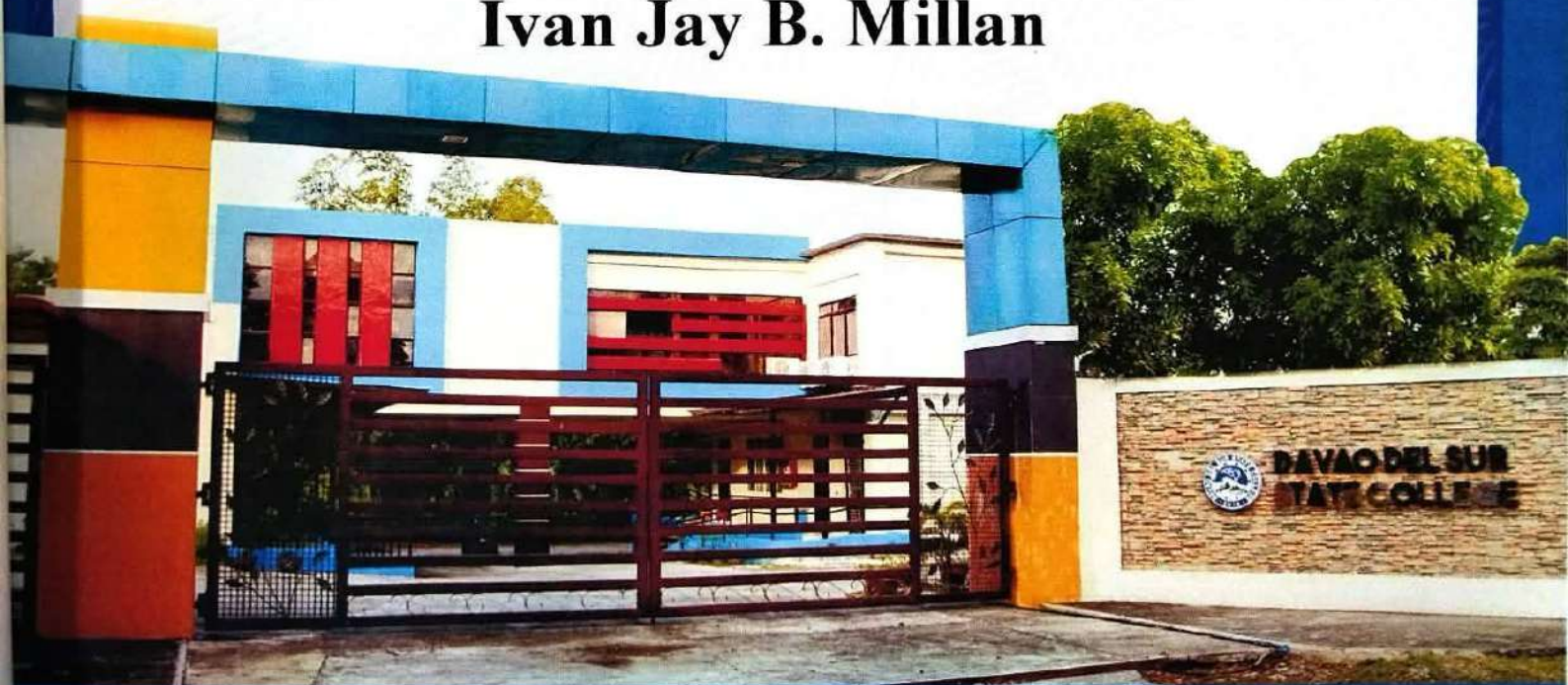


Davao del Sur State College
Brgy. Matti, Digos City, Davao del Sur

Computer Programming I

Version 2.0

Rhea Mae L. Perito, MSIS
Ivan Jay B. Millan



PREFACE

In today's rapidly changing digital world, programming has become an essential skill for students pursuing careers in information technology and related fields. It is not only about writing code, but also about developing logical thinking, solving problems systematically, and creating efficient solutions for real-world problems. A strong understanding of how data is stored, organized, and processed is fundamental to becoming a competent programmer. For this reason, the study of computer programming components, from basic algorithms to modular structures, plays a vital role in the academic formation of future IT professionals.

This course pack is intended for students seeking a basic understanding of programming. It is designed to provide a clear, structured, and meaningful guide in understanding the essential concepts of programming and logic formulation. The lessons are arranged progressively, beginning with foundational ideas such as flowcharting and the Program Development Life Cycle, and progressing to more advanced topics such as arrays and recursion. Each lesson includes not only theoretical discussions but also practical examples, activities, and Java programming exercises to strengthen understanding and application.

More than a collection of learning materials, this course pack is prepared to serve as a reliable academic companion throughout the semester. It aims to help students build confidence in problem-solving, improve their analytical thinking, and develop discipline and persistence in program development. It is hoped that this material will not only enhance technical knowledge but also inspire learners to appreciate the value of careful thinking and continuous practice in computer programming.

May this course pack serve as a useful companion as you explore, practice, and grow in the field of computer programming.

Rhea Mae L. Perito, MSIS

Ivan Jay B. Millan

Authors



TABLE OF CONTENTS

	PAGE
PREFACE	i
TABLE OF CONTENTS	ii
COURSE OVERVIEW	1
MODULE 1: INTRODUCTION TO PROGRAMMING	2
Lesson 1: Flowchart and Algorithms	3
Lesson 2: Basic Control Structures	6
Lesson 3: Introduction to Java Programming	10
MODULE 2: CONTROL STRUCTURES & LOOPS	18
Lesson 1: Single/Multiple and Nested Decisions	19
Lesson 2: Switch Statements	24
Lesson 3: Java for Loop	26
Lesson 4: While/Do-While Loops	28
MODULE 3: ARRAY	32
Lesson 1: Introduction to Array	33
Lesson 2: Processing Array	35
Lesson 3: Search and Sort Operation of an Array	37
MODULE 4: FUNCTIONS AND METHODS	42
Lesson 1: Functions and Methods	43
REFERENCES	
APPENDICES	
Grammarians Certificate	
Course Outline	
Course Syllabus	