

University of Computer Studies, Yangon
2019-2020 Academic Year
Faculty of Information Science

Subject Code	IS 302	Course Title	Basic Data Processing
Semester	First	Course Coordinator	Dr. Zin Thu Thu Myint
Credit	2		
Hours	25 Hours		
Periods	30 Periods(1 period:50 Mins)/2 Period per week		

Current Catalog Description

IS 302 Program Logic and Design. (25)
15 hours lecture; 10 hours activity and discussion.
Pre-requisites: - None

Teaching Mechanism

- Text materials will be distributed with lecture presentation slides and reference Text book from chapter 1 to chapter 6 from “Program Logic and Design Comprehensive”, Sixth Edition writing by Joyce Farrell.
- Edraw_Max software will be learned for practicing in drawing the program design.

Course Outcomes

Students who complete the course will be able to

- Understand pseudocode statements and flowchart symbols
- Learn Data types of variables and writing modularization
- Understand Unstructured and Structure design in Programming Logic
- Practice on writing decision and operator with pseudocode and flowchart
- Learn and practice the looping concepts in pseudocode and flowchart
- Understand arrays and how they occupy
- Learn an Array to replace nested decisions
- Practice the programming logic and design with Edraw_Max software

		An ability to apply knowledge of computing and mathematics appropriate to the discipline;	An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution;	An ability to design, implement and evaluate a computer-based system, process, component, or program to meet desired needs;	An ability to function effectively on teams to accomplish a common goal;	An understanding of professional, ethical, legal, security, and social issues and responsibilities;	An ability to communicate effectively with a range of audiences;	An ability to analyze the local and global impact of computing on individuals, organizations and society;	Recognition of the need for, and an ability to engage in, continuing professional development;	An ability to use current techniques, skills, and tools necessary for computing practices;	principles, and computer science theory in the modeling and design of computer-based systems;	construction of software systems of varying complexity.	management of information systems within a specific application environment.
	Relationship between Course Outcomes and Program Outcomes (S=Strong, M=Medium, W=Weak)	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j-cs)	(k-cs)	(j-is)
	Students who complete the course will be able to												
1	Understand pseudocode statements and flowchart symbols			M	S								
2	Learn Data types of variables and writing modularization			S					M		M		
3	Understand Unstructured and Structure in Programming Logic		M	S	M		M		M		M		
4	Practice the writing decision and operator with pseudocode and flowchart	M		S	W				M			W	
5	Learn and practice the looping concepts in pseudocode and flowchart		S	S	M				M		S	W	
6	Understand arrays and how they occupy	W	M	M	M				S		M	M	
7	Learn an Array to replace nested decisions		M	S	S						M	S	
8	Practice the programming logic with small project for report writing		M	M	M		W	W			M	W	M

Major Topics Covered in the Course

1. Writing Pseudocode
2. Drawing Flowchart
3. Working with Data
4. Creating Modules
5. Understanding Structure
6. Making Decisions
7. Looping
8. Arrays

Assessment Plan for the Course

Overall grade is based on the following:

- 10 % - Class Participation (Attendance)
- 10 % - Practical Assessment
- 30% - Quiz
- 30% - Writing Assignments
- 20% - Tutorials/Test

Participation and Quiz

Students are expected to participate in all class discussions and dialogues readings.

Students are expected to attend the class regularly.

Participation is a major factor in determination of the final grade.

There will be (15 minutes) quiz to 5 or 6 **times** in the classroom.

Students have to answer all quizzes.

Students are **not allowed to answer the quiz again**.

Quizzes will review material from all lessons and lesson topics.

Student will be required to complete the quiz with a passing score of 80% or higher.

Practical Assessment Policy

This is one-by-one assessment with activity deadlines for each student.

There will be **two practical assessments** for every student.

Students are allowed to discuss about the task with others but they **are not allowed to copy** it.

If so, all students (with same answers) must be deducted 50% of their practical assessment mark. Students also need to clearly identify their task in practical assessment.

Assignment Policy

This is one-by-one assignment with activity deadlines for each student.

There will be **three or four writing assignments** for every student.

Students are allowed to discuss about assignments with others but they **are not allowed to copy** it.

If so, all students (with same answers) must be deducted 50% of their assignment mark. Students also need to clearly identify their task in writing assignment.

Assignment Due Dates

Each assignment can take at most one week and late assignments will be penalized at 5% per day unless an excused exception has been arranged such as medical leave.

If student hand in a late assignment, he/she must identify (i) how many day late this assignment is and (2) why.

Tutorial Policy

There will be (30 minutes) Tutorial to **3 or 4 times** in the classroom.

Students have to answer all Tutorials.

Students are not allowed to discuss about Tutorial with others because they **are not allowed to copy** it.

If so, all students (with same answers) must be deducted 50% of their Tutorial mark.

Students are **not allowed to answer the Tutorial again**.

Tutorials will review material from all lessons and lesson topics.

Student will be required to complete the Tutorial with a passing score of 60% or higher.

Plagiarism and Academic Honesty

Plagiarism is using what another person has developed as your own words or thoughts.

Plagiarism is never acceptable. UCSY requires students to conduct themselves honestly

and responsibly and to respect the rights of others. Cheating, plagiarism or other forms of academic dishonesty may result in disciplinary action and sanctions.

IS-302 : Basic Data Processing

First Semester

Text Book : Program Logic and Design (6th Edition)

Period : 30 periods for 15 Weeks (2 periods * 15 weeks)

No.	Chapter	Page	Period	Remark
	Chapter 1 An Overview of Computers and Programming			
1.	1.1 Understanding Computer Systems 1.2 Using Pseudocode Statements and Flowchart Symbols 1.3 Using Sentinel value to End a Program Review Questions Exercises 3,4,5	2-20	2	Overview
	Chapter 2 Working with Data, Creating Modules And Designing High-Quality Programs			
2.	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 1,2,3,5,6	42-68	4	Detail
	Chapter 3 Understanding structure			
3.	3.1 Understanding 3 basic structure 3.2 Using Priming input to structure a program 3.3 Structuring and Modularizing Unstructured logic Review Questions Exercise 2, 3, 6,7	95-115	5	Detail

	Chapter 4 Making Decision			
4.	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 combing Review Questions Exercise 1,2,3,9	137-166	6	Detail
	Chapter 5 Looping			
5	5.1 Understanding the advantages of looping 5.2 Using Loop control variables 5.3 Nested Loops 5.4 Using for loop Review Questions Exercises 1,2,4,6,11	185-206	6	Detail
	Chapter 6 Arrays			
6.	6.1 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 Review Questions Exercises 1,4,9	229-261	7	Detail