	VIETNAM NATIONAL UNIVERSITY OF HO CHI MINH CITY UNIVERSITY OF NATURAL SCIENCES **FACULTY OF INFORMATION TECHNOLOGY**

COURSE SYLLABUS

Course Code: TH134

Title: C Programming in Windows

Credits: 4

Workload:

Lecture hours:	**3** periods * **15** weeks = **45** periods	
Laboratory hours:	**2** periods * **15** weeks = **30** periods	
Preparative hours:	**4** periods * **15** weeks = **60** periods	

Prerequisites: TH012 – Intermediate Programming A2

TH105 – Data structures 2

TH108 – Object-oriented programming

Course Objectives:

This course aims to supply the student with: (1) knowledge about programming in Windows environment: Windows' program management, GUI programming, memory management, and printing; (2) basic skills in learning other high-level programming languages in Windows; and (3) basic skills in studying other Windows programming topics such as: DDE, OLE, peripheral interfaces, etc. This subject uses Windows API technology with C++ language.

Main Text: N/A

References:

- *Borland C++ Version 3.1 Programmer's guide*
  Borland International Inc.
- *Windows API reference guide, Vol. 1,2,3*
  Borland International Inc.
- *Developing Windows applications with Borland C++ 3.1*
  James W. McCord ._SAMS.

Course Outline:

Chapter 1 : Structure of a C program written for Windows

1. Program input
2. Program modules
3. Running mechanism of a program
4. Compiling, testing, and bug detecting

Chapter 2 : Some data structures in Windows

Chapter 3 : Introduction to user interface

1. Menu
    1. Creation and activation
    2. Message processing
    3. Accelerator.
2. Window
    1. Creation
    2. Message processing
3. Dialog box
    1. Data input
    2. Giving messages to users
    3. Message processing
    4. Standard dialogs
4. Modal and modeless dialogs

Chapter 4 : Memory management in Windows.

1. Local memory
2. Global memory

Chapter 5 : Data input

1. Processing messages from mouse
2. Processing messages from scrollbar
3. Processing messages from keyboard
4. Timing with timer messages

Chapter 6 : GDI graphical library

1. Device Context (DC).
    1. Concepts
    2. Initialization and release of DC
    3. Some properties of DC.
2. Graphical functions
3. Printing techniques
    1. Introduction
    2. Getting printer’s information
    3. Printer setup
    4. Using Printer Escape

Chapter 7 : Bitmap images

1. What is a bitmap images?
2. Types of bitmap images:
    1. Resource bitmap.
    2. File bitmap.
3. Loading and showing bitmaps
4. Stretching a bitmap.
5. Color palette.

Chapter 8 : Multi-Document Interface (MDI)

1. Concepts
2. Handle Window Client.
3. Setting up MDI
    1. Frame Window and message processing
    2. Client Window and MDI message processing
    3. Some examples

Grading

Final exam : 50%

Assignments: 50%