

COURSE NAME : COMPUTER ENGINEERING/ INFORMATION TECHNOLOGY
COURSE CODE : CO/IF/CD
SEMESTER : FIFTH FOR CO AND SIXTH FOR CD
SUBJECT TITLE : WINDOWS PROGRAMMING (ELECTIVE-I)
SUBJECT CODE : 9193

Teaching and Examination Scheme:

Teaching Scheme			Examination Scheme						
TH	TU	PR	PAPER HRS	TH	TEST	PR	OR	TW	TOTAL
02	--	04	03	80	20	--	--	25@	125

Rationale:

Microsoft Window is a graphical environment. Window provides rich programming environment that supplies extensive support for developing easy to use and consistent user interface. Windows provides device independent graphics thereby allowing you to write programs without having detail knowledge of the hardware platform on which they will eventually run.

Visual C++ has powerful features for writing windows applications such as class wizards and ActiveX controls. Class wizards write code for you! In the industry this type of program is often referred to as a CASE (Computer Aided Software Engineering). ActiveX controls are pieces of Software that you can easily “Plug” in to your Visual C++ programs.

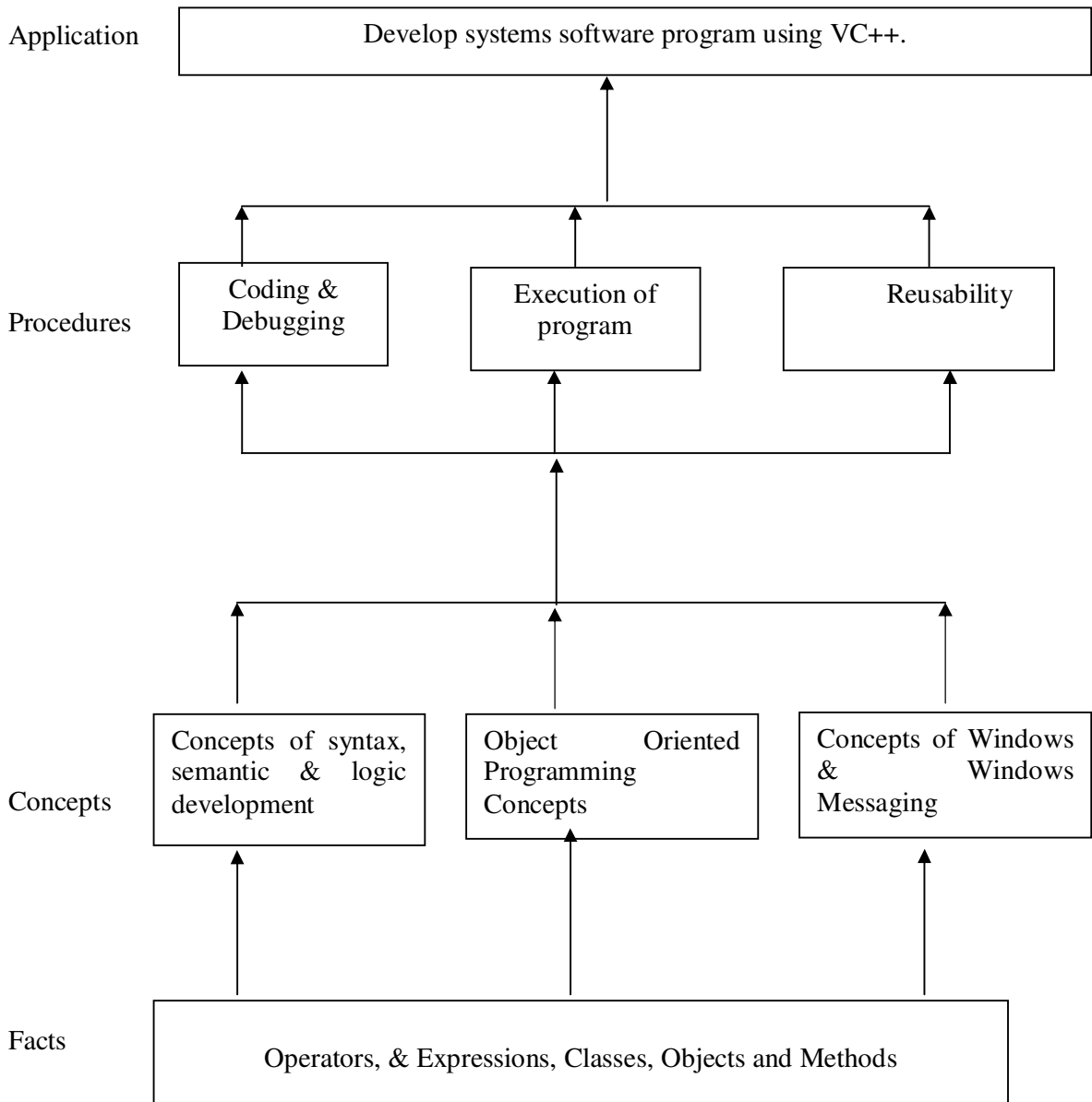
This Subject covers from Basics to writing codes for Keyboard & Mouse handling.

Objectives:

Students will be able to:

1. Use Visual environment.
2. Write simple programs using VC++.
3. Develop program for drawing dot, lines and shapes.
4. Handle Keyboard and Mouse input through programs.
5. Create Checkbox, Scroll bars etc.

Learning Structure:



Contents: Theory

Chapter	Name of the Topic	Hours	Marks
01	Overview of Windows messaging.	06	20
	1.1 The Windows Environment, History of Windows, Aspects of Windows, Windows Programming Options, APIs and Memory Models, The Programming Environment, Your First Windows Program,		
	1.2 The MessageBox Function, A Brief History of Character Sets 20 American Standards, Wide Characters and C, The char Data Type, Windows' String Functions, Using printf in Windows, Formatting Message Box.		
	1.3 Registering the Window Class, Creating the Window, Displaying the Window, The Message Loop, The Window Procedure.		
02	GDI and Basic Drawings	08	20
	2.1 An Introduction to GDI, The Structure of GDI, The GDI Philosophy, The GDI Function Calls, The GDI Primitives, The Device Context.		
	2.2 Drawing Dots and Lines, Setting Pixels, Filling in the Gaps, Drawing Filled Area, The GDI Mapping Mode Rectangles, Regions, and Clipping.		
03	The Keyboard	06	12
	3.1 Keyboard Basics, Keystrokes and Characters, Using Keystroke Messages, Character Messages, Keyboard Messages and Character Sets, The KEYVIEW1 Program, The Foreign-Language Keyboard Problem, The Caret (Not the Cursor), The Caret Functions.		
04	The Mouse	06	12
	4.1 Mouse Basics, Client-Area Mouse Messages, Simple Mouse Processing: An Example, Mouse double-clicks, Nonclient-Area Mouse Messages, The Hit-Test Message, A Sample Program		
	4.2 Emulating the Mouse with the Keyboard, Using Child Windows for Hit-Testing, Capturing the Mouse.		
05	Client Window Controls	06	16
	5.1. The Button Class, Creating the Child Windows, Push Buttons, Check Boxes, Radio Buttons, Group Boxes, Changing the Button Text, Visible and Enabled Buttons, Buttons and Input Focus, Controls and Colors, System Colors, The Button Colors, The WM_CTLCOLORBTN Message,		
	5.2. The Scroll Bar Class 383 The COLORS1 Program Coloring the Background, Coloring the Scroll Bars and Static Text, The Listbox Class, List Box Styles, Putting Strings in the List Box, Selecting and Extracting Entries, A Simple List Box Application.		
Total		32	80

Practical:

Skills to be developed:

Intellectual skills:

- Use of programming language.
- To be able to apply different logics to solve given problem.
- To be able to write program using different implementations for the same problem.
- Identify different types of errors as syntax semantic, fatal, linker & logical.
- Debugging of programs.
- Understanding different steps to develop program such as.

Motor skills:

- Proper handling of Computer System.

List of Practical:

Sr. No.	Title of Experiment	No of Practical
1	Demonstration of Visual Environment	1
2	Writing simple VC++ programs	2
3	Writing programs on drawing dots, lines, rectangles, filling different shapes.	8
4	Program on reading keystrokes from Keyboard.	2
5	Program on displaying text at desired window	1
6	Finding size, Resizing windows	2
7	Program on handling mouse	2
8	Creating different controls (such as checkbox, scrollbar, etc)	6
9	Program on timer demonstration	2

Learning Recourses:**3. Books**

Sr.No.	Author	Title	Publication
1	Charles Petzold	Programming Windows	Microsoft Press
2	Brent E. Rector Joseph M. Newcomer	Win32 Programming	Addison Wesley

4. Website

- http://elvis.rowan.edu/~kay/cpp/vc6_tutorial/
- <http://www.onesmartclick.com/programming/visual-cpp.html>
- <http://www.functionx.com/visualc/>