

ITEM	DETAILS	
1. Title of subject	RAPID APPLICATION DEVELOPMENT	
2. Subject code	CSR200	
3. Status of subject	Major	
4. Stage	Year 2	
5. Credit Hour	3	
6. Pre-Requisite	None	
7. Assessment	40% Coursework Test 1 – 10% Test 2 – 10% Assignments – 20% 60% Examination	
8. Semester	Semester 2	
9. Objective of subject	To enable students to: Gain a thorough understanding on Visual Basic 6 based on practical and effective programming techniques.	
10. Synopsis of subject	Understand event-driven programming; Explain Visual Basic features; Create a sample VB application that uses Class Modules; Intrinsic controls; Demonstrate the understanding of the Multiple Document Interface; Create a database using the Visual Basic Data Manager program; Demonstrate the knowledge of such database development topic areas; Custom controls; MS Windows custom controls; Object linking and embedding; Demonstrate how to create sequential files and random access files; Demonstrate how to use Visual Basic Advanced Active X controls and access the Microsoft API in Visual Basic; Active X code components; Creating ActiveX controls and documents.	
11. Details of subject	Contents	Hours

<p>Week 1</p>	<p>Topic: 1.0 RAD Concept and Introduction to programming task. 1.1 Introduction to RAD model 1.1.1 RAD Phases Business modelling, Data modelling, Process modelling, Application generation, Testing and turnover. 1.1.2 Comparison between RAD and traditional methodologies 1.1.3 Drawbacks of RAD 1.2 Introduction to the latest tools available. Eg. Power building, Visual Java, Visual Basic, Visual C++.</p> <p>Learning Outcomes: At the end of the lessons, students will be able to:</p> <ul style="list-style-type: none"> Understand what is RAD and general concepts in RAD, latest tools available for RAD. <p>Activity: Lecture, tutorial and lab</p>	<p>6</p>
<p>Week 2 and 3</p>	<p>2.0 Introduction to Visual Basic as RAD environment. 2.1 What is Visual Basic and how it differs from other programming languages 2.2 Introduction to the Visual Basic Compiler 2.3 Controls, Lists, variable declaration and data types. 2.4 Events and event programming, coding conventions 2.4.1 Naming convention, type decelerating characters, commenting style and lining continuation 2.5 Methods, Attributes 2.5.1 Parameter passing (byval and byref) 2.6 Arrays 2.6.1 Dynamic, fixed and multi dimensional arrays, control arrays 2.7 Conditional logic and looping 2.8 Error Handling 2.8.1. On Error statement, line labels, Error objects, methods: raise, clear. 2.9 Procedures and Functions, built-in functions 2.10. Dialog Boxes, MDI</p> <p>Learning Outcomes: At the end of the lessons, students will be able to:</p> <ul style="list-style-type: none"> Be familiar and learn basic elements in Visual Basic <p>Activity: Lecture, tutorial and lab</p>	<p>12</p>

<p>Week 4</p>	<p>3.0 Component Development 3.1 Introduction to COM, DCOM, OLE and other technologies such as Java Beans, CORBA and RMI 3.2 Component base development 3.3 Difference between VBX s and OCX s, ActiveX Controls and Visual Basic, ActiveX EXE, ActiveX DLL, ActiveX Document EXE and ActiveX document DLL 3.3 Calling DLL s 3.4 FlexGrid, DBGrid, MAPI, TAPI</p> <p>Learning Outcomes: At the end of the lessons, students will be able to:</p> <ul style="list-style-type: none"> • Learn the component development in RAD. <p>Activity: Lecture, tutorial and lab</p>	<p>6</p>
<p>Week 5</p>	<p>4.0 Reusability 4.1 Introduction to objects and classes in VB 4.1.1. Programming with objects (instances) System objects, Object browser 4.3 Class Modules in VB 4.3 Constructors and destructors (Initialize, Terminate)</p> <p>Learning Outcomes: At the end of the lessons, students will be able to: Understand the concepts of objects and classes in VB</p> <p>Activity: Lecture, tutorial and lab</p>	<p>6</p>
<p>Week 6 and 7</p>	<p>5.0 Database Design and Modelling Tools 5.1 Database connection in Visual Basic 5.1.1. DAO, RDO, ADO technologies Direct ODBC (OLEDB, Provider) 5.2. Data Control Programming 5.2.1. DAO, ADO controls, data environment, Data reporting 5.3. Visual Modeller in Visual Basic 6 5.3.1. Client/ Server Architecture 5.3.2. Data service, Business service, Presentation service 5.4. Visual Database tools 5.4.1. Visual Data Manager</p> <p>Learning Outcomes: At the end of the lessons, students will be able to:</p> <ul style="list-style-type: none"> • Learn about database design and modelling tools for RAD. <p>Activity: Lecture, tutorial and lab</p>	<p>12</p>

	Total	42
12. Text	Compulsory	<ol style="list-style-type: none"> 1. Sheriff, P. D. (1999). <i>Paul Sheriff Teaches Visual Basic 6</i>. Pearson Education. 2. Thayer, R. (2000). <i>Visual Basic 6 Unleashed</i>. Sams. Pap/Com Edition.
	Reference	<ol style="list-style-type: none"> 1. Schneider, D.I. (1999). <i>An Introduction to Programming Using Visual Basic 6.0</i> (4th ed.). New Jersey: Prentice Hall. 2. Harriger, A. R., Lisack, S. K., Gotwals, J. K., & Lutes, K. D. (2000). <i>An Introduction to Computer Programming with Visual Basic 6: A Problem-Solving Approach</i>. New Jersey: Prentice Hall.