MOHANLAL SUKHADIA UNIVERSITY, UDAIPUR

BACHELOR OF COMPUTER APPLICATION
(BCA Annual Scheme)

(To be offered in affiliated colleges from session 2016-17)

1. **Duration of the Course :** The BCA (AnnualScheme)course will be of three years duration. Each year will be approximately 10 months (minimum 180 working days) duration.
2. **Medium of Instruction :** The medium of instruction and examination shall be English.

Third Year B.C.A.

(a) The minimum marks for passing III year shall be 40% in each paper and 40% marks in the aggregate of papers.

A candidate may be allowed to reappear in two papers of III year if he has/she secured at least 40% marks in at least six papers/practicals/project out of 8 theory/practical/project papers and more than 40% in aggregate. Such candidate shall be required to appear in papers in which he has secured less than 40% marks along with due papers of I & II year (if any) when these courses are offered again, so as to sat isfy the passing criteria laid in III(a).

(c) A candidate fails to satisfy the criteria III(a), III(b) shall be required to rejoin the course in III year, if otherwise eligible in accordance with the University regulations laid in this regard.

No candidate shall be deemed to have satisfied examination requirement for the award of BCA degree unless he fulfills the criteria for passing I year, II year and III year examinations, as laid in I(a), II(a) and III(a).

Candidate will not be allowed to reappear in any papers of I,II & III year to improve the percentage.

At the end of final examination, the candidates eligible for the award of B.C.A. (Annual Scheme)degree shall be classified on the basis to the marks obtained in the I,II & III year examinations, taken together, as follows:

(a) **I division with distinction :** 75% or more marks in the aggregate and provided the candidate has passed all the papers and examinations in the first attempt.

(b) **I division :** 60% or more marks but fails to satisfy the criteria for being classified as first division with distinction laid in (a).

(c) **II division : 48% or more but less than 60%**

(d) **III division: 40% or more but less than 48%**

A candidate must pass the examinations within five years of the initial admission to the first year of the course.

BCA 302: Visual Programming

UNIT-I

WINDOWS PROGRAMMING

Windows environment – a simple windows program – windows and messages – creating the window – displaying the window – message loop – the window procedure – message processing – text output – painting and repainting – introduction to GDI – device context – basic drawing – child windowcontrols

UNIT-II

VISUAL C++ PROGRAMMING – INTRODUCTION

Application Framework – MFC library – Visual C++ Components – Event Handling – Mapping modes – colors – fonts – modal and modeless dialog – windows common controls – bitmaps

UNIT-III

THE DOCUMENT AND VIEW ARCHITECTURE

Menus – Keyboard accelerators – rich edit control – toolbars – status bars – reusable frame window base class – separating document from its view – reading and writing SDI and MDI documents – splitter window and multiple views – creating DLLs – dialog based applications

UNIT-IV

ACTIVEX AND OBJECT LINKING AND EMBEDDING (OLE)

ActiveX controls Vs. Ordinary Windows Controls – Installing ActiveX controls – Calendar Control – ActiveX control container programming – create ActiveX control at runtime – Component Object Model (COM) – containment and aggregation Vs. inheritance – OLE drag and drop – OLE embedded component and containers – sample applications

UNIT-V

ADVANCED CONCEPTS

Database Management with Microsoft ODBC – Structured Query Language – MFC ODBC classes – sample database applications – filter and sort strings – DAO concepts – displaying database records in scrolling view – Threading – VC++ Networking issues – Winsock – WinInet – building a web client – Internet Information Server – ISAPI server extension – chat application – playing and multimedia (sound and video) files

TEXT BOOKS

1. Charles Petzold, “Windows Programming”, Microsoft press, 1996 (UnitI)
2. David J.Kruglinski, George Shepherd and Scot Wingo, “Programming Visual C++”, Microsoft press, 1999 (Unit II –V)

REFERENCE

1. Steve Holtzner, “Visual C++ 6 Programming”, Wiley Dreamtech India Pvt. Ltd., 2003.