MANGALORE UNIVERSITY
Bachelor of Commerce (B. Com.) Degree Programme
2019-2020 Onwards
V Semester B.Com. – Computer Applications
BLOWN UP SYLLABUS & PRACTICAL LISTS

Group-I **Course-10** **Theory/Week: 5 Hrs** **Credits:2**	**BCMCAC 332- E1: Graphics and Animation Application**	**48 hours** **I.A:20** **Exam:80**

UNIT - I

Introduction to Computer Graphics: Overview of Computer Graphics, Introduction to image and objects, Image Representation, Basic Graphics pipeline, Bitmap and vector-based graphics, Computer Graphics Application and Software, Description of some graphics devices, Input Devices for Operator Interaction, Active and Passive Graphics Devices, Display Technologies, Storage Tube Graphics Displays, Calligraphic Refresh Graphics Displays, Raster Refresh (Raster-Scan) Graphics Displays, Cathode Ray Tube Basics, Color CRT Raster Scan Basics, Video Basics, The Video Controller, Random Scan Display Processor, LCD Displays.

UNIT - II

Animation: The Power of Motion, Principles of Animation, Animation by Computer, Animation Techniques: Cel Animation, Computer Animation.
Video: Using Video, How Video Works and Is Displayed, Digital Video Containers, Obtaining Video Clips, Shooting and Editing Video.
Making Multimedia: Stages of Multimedia Project, Types of Authoring Tools, Object: Choosing an Authoring Tool.

UNIT - III

Photoshop: Getting started with Photoshop, Opening an Existing File, The Photoshop Program Window, Screen Modes, Saving Files, Reverting Files, Closing Files, Preferences, Working With Images: Vector and bitmap Images, Image Size, Image Resolution, Editing Images, Opening Files created in Illustrator or Freehand, color Modes, Setting a current Foreground and Background Colors, File Formats, Making Selection, The Grow and Similar Commands, Moving a Portion of an Image, Editing Selections, Copying a Selection in to another Image, Filling a Selection, Transforming selections.

Painting, Drawing and Retouching Tools: The Painting Tools, The Drawing tools, The Retouching Tools., Layers Palette, Working with Layers, Layer Effects Type, Creating Type, Type Tool, Moving the Text, Creating Paragraph Type, Resizing a bounding Box, Changing the Type settings, Converting the Point Type to Paragraph Type, Converting Type Layers to Standard Layers, Type Masking.

Filters: The Filter Menu, Liquefy Filter, Vanishing Point Filter, Artistic Filters**,** Brush Stroke Filters, Distort Filters**,** Pixelate Filters, Sketch Filters, Stylize Filters, Other Filters

UNIT - IV

Introduction to Illustrator CS4: Getting started with the Illustrator, The illustrator CS4 workspace, Creating new illustrator documents, Customizing the workspace.

Getting started with Drawing Tools: Understanding the Basics of Drawing, Line tools in illustrator, Shape tools in Illustrator, Drawing tools in Illustrator, Editing tools in Illustrator, cutting tools in illustrator.

Working with Objects: Selecting objects in Illustrator, Editing objects.

Text Books:

1. Ashish Shah & Kiran Gurbani, Computer Graphics and Animation, Himalaya Publishing House, 2018
2. Tay Vaughan, Multimedia: Making It Work,8th Edition, Tata McGraw Hill,2011
3. Satish Jain, Photoshop CS6 Training Guide, BPB Publications, 2014
4. Vikas Gupta, Comdex 9-in-1 DTP Course Kit, Published by Dreamtech,2014

Practical List

V Sem B. Com. (CBCS)

VB.Net and Computer Graphics

PART-A (VB.Net)

1. Write a program to find the Sum of digit and check palindrome or not. Accept input through textbox and display the results in label. Also validate for invalid input such as empty input and negative integer.
2. Create 3 child forms. Create an MDI form with menu options to open all these forms as child form, closing them and rearrange the child forms as follows.

   Child Forms Window

   Open Cascade

   Close Tile Horizontal

   Tile vertical

   Arrange icons.
3. Write a program to select a course from a list box and display the fees and regulation using the text boxes and labels (Fees maintained in an array in the program)
4. Design a VB interface containing

a. A picture box whose picture should be changed every 5 second (use 5 pictures).

b. Textboxes to display date & time and day greeting based on time.

Part-B (Computer Graphics)

1. Design a simple gradient logo in Adobe Illustrator and combine it with text.
2. Design an image to show how to duplicate objects around a circle using the transform effect to create a non-destructive repeated shape.
3. Design a banner using an isometric text effect.
4. Create image in Photoshop Painting Tools or use existing images copy the portions of one image to another image. Use Toolbox options Marquee Tool (Rectangular Marquee, elliptical Marquee), Move, Lasso Tool, Magic wand and crop tools.
5. Create images of artistic architectures using Photoshop Painting Tools (brush, pencil, color, paint Bucket tools) Drawing tools and Retouching tools.
6. Create image or use existing images and apply different types of photoshop. Filters for different image (Liquefy, vanishing point, artistic, brush strokes, distort, noise, pixilated, lighting, sharpen, sketch etc)

Part-C (VB.Net)

1. Create an application program for a post with the ability to take input from a student (name, father's name, date of birth (by using date picker) sex (option button), qualification (using list box), address (using multiple text box), hobbies (check box) use proper validation and display required messages. Store the valid information in a table and use data grid to view the inserted records.
2. Create table TELEPHONE containing Telephone number, name, and address of a customer as the fields. Set up a VB interface with command button to add, edit, delete, save.
    i) Apply validation rule telephone number to check for only +ve numeral
    ii) All the data are mandatory.
    iii) When editing Telephone number should not be modified
3. Create a table item contains Item no, name, quantity in stock and unit price. Design a VB interface to enter the records and save to the table. Apply the validation rule for quantity and price for +ve numbers and non-zero. Use the command buttons to navigate (first, next, prev, last) through the records.

Evaluation Scheme for Lab Examination

Assessment Criteria		Marks
Program -1 from Part A	Writing & executing the Program	08
Program -2 from Part B	Writing & executing the Program	07
Program -2 from Part C	Writing & executing the Program	15
Practical Record		05
Viva-Voce		05
Total		**40**