KAKATIYA UNIVERSITY
Under Graduate Courses (Under CBCS 2019 - 2022)
B.A. / B.Sc. Life Science (Computer Applications) II Year
SEMESTER – IV

MULTI MEDIA SYSTEMS

Theory	4 Hours/Week	4 Credit	Internal marks = 20
Practical	3 Hours/Week	1 Credit	External Marks = 80

Unit - I
Multimedia: Introduction, Definitions, Where to Use Multimedia- Multimedia in Business, Schools, Home, Public Places, Virtual Reality; Delivering Multimedia.
Text: Meaning, Fonts and Faces, Using Text in Multimedia, Computers and Text, Font Editing and Design Tools, Hypermedia and Hypertext.
Images: Before You Start to Create, Making Still Images, Color.

Unit - II
Sound: The Power of Sound, Digital Audio, MIDI Audio, MIDI vs. Digital Audio, Multimedia System Sounds, Audio File Formats, Adding Sound to Your Multimedia Project.
Animation: The Power of Motion, Principles of Animation, Animation by Computer, Making Animations.
Video: Using Video, How Video Works and Is Displayed, Digital Video Containers, Obtaining Video Clips, Shooting and Editing Video.

Unit - III
Making Multimedia: The Stages of a Multimedia Project, the Intangibles, Hardware, Software, Authoring Systems
Designing and producing: designing the structure, designing the user interface, a multimedia design case history, producing.

Unit - IV
The Internet and Multimedia: Internet History, Internetworking, Multimedia on the Web.
Designing for the World Wide Web: Developing for the Web, Text for the Web, Images for the Web, Sound for the Web, Animation for the Web, Video for the Web.
Delivering: Testing, Preparing for Delivery, Delivering on CD-ROM, DVD and World Wide Web, Wrapping.

Text Book:
1. Tay Vaughan, "Multimedia: Making it work", TMH, Eighth edition.

References:
1. Ralf Steinmetz and KlaraNaharstedt, "Multimedia: Computing, Communications Applications", Pearson.
2. Keyes, "Multimedia Handbook", TMH.
3. K. Andleigh and K. Thakkar, "Multimedia System Design", PHI.
4. Spoken Tutorial on "GIMP" as E-resource for Learning:-http://spoken-tutorial.org
5. Spoken Tutorial on "Blender" as E-resource for Learning:-http://spoken-tutorial.org

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MULTI MEDIA SYSTEMS -LAB

Practical   3 Hours/Week   1 Credit Marks: 25

Note:
- Programs of all the Concepts from Text Book including exercises must be practice and execute.
- Faculty must take care about UG Standard Programs.
- In the external lab examination student has to execute two programs with compilation and deployment steps are necessary.
- External Vice-Voce is compulsory.

Example programs:

Practical exercises based on concepts listed in theory using Presentation tools in office automation tool/ GIMP/Blender / Audacity/ Animation Tools/ Image Editors/ Video Editors.

Implement the followings using Blender -

1. Create an animation using the tools panel and the properties panel to draw the following – Line, Pen, oval, circle, rectangle, square, pencil,brush, lasso tool
2. Create an animation using text tool to set the font, size, colour etc.
3. Create an animation using Free transform tool that should use followings-
    Move Objects
    Skew Objects
    Stretch Objects
    Rotate Objects
    Stretch Objects while maintaining proportion
    Rotate Objects after relocating the center dot
4. Create an animation using layers having following features-
    Insert layer, Delete layer, guide layer, Mask layer.
5. Modify the document (changing background colour etc.)Using the following tools
    Eraser tool
    Hand tool
    Ink bottle tool
    Zoom tool
    Paint Bucket tool
    Eyedropper tool
6. Create an animation for bus car race in which both starts from the same point and car wins the race.
7. Create an animation in which text Hello gets converted into GoodBye (using motion/shape tweening).
8. Create an animation having five images having fade-in fade-out effect.
9. Create an scene to show the sunrise (using multiple layers and motion tweening)
10. Create an animation to show the ripple effect.
11. Create an animation (using Shape tweening and shape hints) for transforming one shape into another.
12. Create an animation for bouncing ball (you may use motion guide layer).

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PYTHON – II

(Skill Enhancement Course – III)

Theory　　　　　**2Hours/Week**　　　　　**2Credits**

Unit – I

Functions: Introduction, Defining and Calling a Void Function, Designing a Program to Use Functions, Local Variables, Passing Arguments to Functions, Global Variables and Global Constants, Value-Returning Functions

Unit - II

Generating Random Numbers, Writing Our Own Value-Returning Functions, The math Module, Storing Functions in Modules. Recursion: Introduction, Problem Solving with Recursion, Examples of Recursive Algorithms.Strings: Basic String Operations, String Slicing, Testing, Searching, and Manipulating Strings.

Text Book:

Tony Gaddis, Starting Out With Python (3e)

References:

1. Kenneth A. Lambert, Fundamentals of Python
2. Clinton W. Brownley, Foundations for Analytics with Python
3. James Payne, Beginning Python using Python 2.6 and Python 3
4. Charles Dierach, Introduction to Computer Science using Python
5. Paul Gries, Practical Programming: An Introduction to Computer Science using Python 3.

SCI LAB – II

(Skill Enhancement Course –IV)

Theory	2Hours/Week	2Credits

Unit – I

Programming in scilab – introduction, variables & variable names, assignment statements, arithmetic, relational, logical operators, input & output, flow control/branching/conditional statements, break and continue, handling matrices with loops.

Menus and Dialog Boxes – introduction, a simple menu example, scilab window with greetings menu added, executing submenus from command line, linking menus to scilab code from external files, entering data through dialog boxes

Unit – II

Graphic Output – introduction, 2d plotting, function versions for graphic commands, 3d plotting, other graphic primitives.

String Handling Functions – symbolic processing in scilab, creation of a linear combination of arguments, string to ASCII conversion, creation of a string of blank characters, conversion of a string to uppercase and lowercase, string matching, string concatenation, reversing a string, replacement of a string by another, length of a string, type checking.

Text Book:

1. Er. Hema Ramachandran, Dr.Achuthsankar S. Nair, Computer SCILAB–A Free Software to MATLAB
2. Sci lab a Beginners Apporach by Anil kumar Varma

References:

1. Digite, Introduction to ScilabDigite, Optimization in ScilabScilab Enterprises, Scilab for Very Beginners Digite, Introduction to Discrete Probabilities with Scilab