



बिरसा मुंडा ट्रायबल युनिवर्सिटी Birsamunda Tribal University

राजपिपला, जि० नर्मदा Rajpipla, Dist. Narmda

Established by Tribal Development Department, Govt. of Gujarat

School of Science B.Sc. (Chemistry) Programme

Subject Code & Name:- BS04SECHE1 Animation, Graphics and Multimedia

Teaching and Evaluation Scheme:

Teaching Scheme				Examination Scheme			
Credits				Component Weightage (%)			
				CCE		SEE	
L	T	P	Total	TH	PWE	TH	PWE
1	0	1	2	25	25	25	25

Programme Name	B.Sc.
Semester	IV
Course Code	BS04SECHE1
Course Title	Animation, Graphics and Multimedia
Course Content Type (Th./Pr.)	Theory/Practical
Course Credit	2
Sessions+ Lab. Per Week	1+2*
Total Teaching/Lab. Hours	30 Hours
* 2 Laboratory = 1 Session	

Learning Objectives
1. Understand the basic principles and components of multimedia 2. Learn to use graphic design and animation tools 3. Develop and integrate multimedia elements 4. Enhance digital creativity and communication skills
Prerequisites (if any)
Basic Understanding and Operating of Computer System
Learning Outcomes
On the completion of this course, students will able to: 1. Create simple 2D animations and edit basic audio and video clips 2. Demonstrate creative thinking and visual communication skills





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Detailed Contents		
UNIT	TOPIC/SUB-TOPIC	TEACHING HOURS
I	Fundamentals of Graphics and Multimedia 1. Introduction to Multimedia <ul style="list-style-type: none">• Definition, components: Text, Image, Audio, Video, Animation• Applications of Multimedia (Education, Entertainment, Advertising, Web)• Multimedia systems: Hardware and Software requirements 2. Basics of Digital Graphics <ul style="list-style-type: none">• Raster vs Vector Graphics• Image file formats: JPEG, PNG, GIF, SVG, BMP• Color models: RGB, CMYK, Grayscale• Resolution, DPI & PPI concepts 3. Graphic Design Principles <ul style="list-style-type: none">• Layout, Balance, Contrast, Alignment, Repetition, Proximity• Typography basics: Fonts, readability, spacing• Visual hierarchy and design composition 4. Graphic Editing Tools (Hands-on) <ul style="list-style-type: none">• Introduction to tools like Canva / Figma / GIMP or any other open-source tools• Creating social media posts, posters, banners	15





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II	Animation Techniques and Multimedia Project Design 1. Introduction to Animation <ul style="list-style-type: none">• Types of Animation: 2D, 3D, Stop Motion• Frame-by-frame animation concept• Storyboarding and scriptwriting for animation 2. Basic Animation Tools (Hands-on) <ul style="list-style-type: none">• Tools: Pivot Animator / Pencil2D / Animaker / OpenToonz or any other open-source tools• Creating simple animations: walking character, bouncing ball, animated text 3. Audio and Video Editing (Introduction) <ul style="list-style-type: none">• Basics of sound editing using Audacity / Soundtrap• Basics of video editing using OpenShot / Clipchamp / CapCut	15
Text Book(s)		
N/A		
Reference Books		
<ol style="list-style-type: none">1. Multimedia: Making It Work by Tay Vaughan, Publisher: McGraw-Hill2. Principles of Multimedia by Ranjan Parekh, Publisher: Tata McGraw-Hill3. Computer Graphics, Multimedia and Animation by Pakhira Malay K., Publisher: PHI Learning		
Web Resources		
<ol style="list-style-type: none">1. https://www.khanacademy.org/computing/computer-programming2. https://www.canva.com/learn/3. https://www.khanacademy.org/partner-content/pixar4. https://www.pencil2d.org5. https://www.gimp.org/tutorials/		
Required Software(s) (if any)		
Tools: Canva / Figma / GIMP / Pivot Animator / Pencil2D / Animaker / OpenToonz / Audacity / Soundtrap / OpenShot / Clipchamp / CapCut / or any other open-source tools		





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Practical(s) (if any)

Create a basic multimedia project incorporating:

- Graphics
- Audio
- Animation
- Simple video (1-2 min clip)

L:: Lecture, **T::** Tutorial, **P::** Practical

CCE:: Continuous and Comprehensive Evaluation

(CCE Theory includes Mid Semester Examination, Assignment, MCQ quizzes, Seminar, Reflective notes, class participation, case analysis and presentation, slip tests (announced/surprised), attendance etc. or any combination of these)

PWE:: Practical Work Examination

(PWE includes Laboratory practical work, project work, viva simulation exercise work etc.)

SEE:: Semester End Evaluation

