

Sant Gadge Baba Amravati University

Syllabus Prescribed for 2024-25 Year UG Programme

Part B

Faculty: Interdisciplinary Studies

Programme: B.Sc. Animation

Semester: V

Theory

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
3ANI501	Marketing and Merchandising	15

Course Outcomes

1. Develop various concept of marketing management and marketing mix.
2. Adapt the concept of Promotion and its tools.
3. Develop strategies for the efficient and effective distribution of films, concepts, goods, and services that respond to evolving markets.
4. Design, Plan and discuss ideas for merchandising.
5. Develop and plan strategies for digital for film marketing and promotion.

Unit	Content
Unit I	FILM MARKETING Introduction, Origin, Development of market research in film industry. Conventional Publicity, Visual Representation: Film Posters, Film Trailers and their purpose, Television and Print Advertising, Key Figures in the Film Industry, Release Strategies, Film Festivals and Markets. (3 periods)
Unit II	PROMOTION Promotion mix ,Advertising Decision, Advertising objectives, Advertising and Sales Promotion, Developing Advertising Programme, Role of Media in Advertising, Advertisement effectiveness Sales force Decision. (3 period)
Unit III	DISTRIBUTION Concept, The Future of Distribution – Dealing With, Decreasing Revenue and Piracy. Distribution Models Sales Agents & Producer's Representatives, Attorneys, Accountants, Publicists and Other, Professionals & Organizations, Social Media and Film Marketing Finding Alternative Routes to Market, Contracts & Agreements (3 periods)
Unit IV	MERCHANDISE Definition, Function, history, image mix, display basics, design, Planograms, Merchandise Presentation, Store Planning and Fixtures (3 period)
Unit V	DIGITAL MARKETING Definition and concept behind digital marketing, importance of digital marketing, how it is different from traditional marketing techniques, Application aspects of Digital Marketing. Definition, Nature, Role and Importance in marketing, Businesses using all of the major social media platforms (Facebook, Twitter, Instagram, YouTube) to connect with the audience and convince them for a call of action. (3 period)

Reference Books:

1. Marketing Management Concepts Cases, challenges and trends, Govindarajan, Prentice Hall of India, New Delhi. 2009
2. Film Marketing- Finola Kerrigan, A Butterworth-Heinemann Title, 1st edition, 978-0750686839
3. Guerrilla Film Marketing ,B K Das, Cambridge, Robert G. Barnwell, Routledge publication,
4. Visual Merchandising, Swati Bhalla, Tata McGraw Hill Education Private Limited
5. Marketing Management Text and Cases, K.S. Chandrasekar, Tata McGraw-Hill Publication, New Delhi.2010.
6. Marketing Management Concepts Cases, challenges and trends, Govindarajan, Prentice Hall of India, New Delhi. 2009

Any pertinent media (recorded lectures, YouTube, etc.) if relevant:

1. Digital Marketing, Dr. Tejinderpal Singh, <https://youtu.be/FXYjur6abww>

Programme: B.Sc. Animation

Semester: V

Theory

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
3ANI502	Recent Trends in Animation	15

Course Outcomes

1. Introduce the concept of Virtual reality.
2. Understanding Augmented Reality concepts in various fields.
3. Acquire knowledge of Artificial intelligence and its applications.
4. Infer the fundamentals concepts of mixed reality.
5. Understanding the concept of block chain and digital rights

Unit	Content
Unit I	Virtual Reality (VR) Introduction to Virtual Reality (VR): Introduction, Key Elements of VR, Experience, History, Applications, Input, Output, Representation of the Virtual World Visual Representation in Virtual Reality, Aural Representation and Haptic Representation in Virtual Reality, Rendering Systems (3 periods)
Unit II	Augmented Reality (AR) Concepts: Computer Graphics, Dimensionality, Depth Cues, Registration, and Latency, Working of Augmented Reality, Augmented Reality Hardware (Sensors, Processors, Displays), Ingredients of an AR Experience. Augmented Reality Software and Mobile Augmented Reality, Augmented Reality Systems, Software Components, Software Tools for Content Creation, Interaction in Augmented Reality, Augmented Reality Techniques: Marker based and Marker less tracking, Mobile Augmented Reality. (3 periods)
Unit III	Artificial Intelligence Concept, AI-driven Animation tools for animation: Deepfake (3 period)
Unit IV	Virtual Production and Mixed Reality Virtual production: Concept, Tools, Applications, , Metaverse, Real-time Animation, hologramic (3 period)
Unit V	Block chain for Digital Rights Management Concept of block chain, Elements of a Blockchain, Blockchain Applications, Evolution of the Blockchain Technology, Digital rights: concept, history tools, Types of Animation IP Rights (3 period)

Reference Books:

1. S. Russel and P. Norvig, “Artificial Intelligence – A Modern Approach”, Second Edition, Pearson
 2. Mastering Blockchain: A deep dive into distributed ledgers, consensus protocols, smart contracts, DApps, cryptocurrencies, Ethereum, and more, 3rd Edition, Imran Bashir, Packt Publishing, 2020, ISBN: 9781839213199,
 3. Automatic Generation of Computer Animation: Using AI for Movie Animation, Ruqian Lu, Songmao Zhang, Springer-Verlag Berlin Heidelberg, 3540431144
- Any pertinent media (recorded lectures, YouTube, etc.) if relevant:**
1. <https://youtu.be/GHpchgLoDvI>.
 2. <https://youtu.be/O9b7ezt0O5s>
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Programme: B.Sc. Animation

Semester: V

Practical

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
3ANI503	Assets Building-III	20

Course Outcome.

1. Describe the concept of character modeling
2. Use of character and bird modeling
3. Use of UV and texturing on props, characters and modeling
4. Apply Displacement Maps on Props & characters.

Course Content

Unit	Content
Unit I	Character Modeling, Texturing & Lighting Character modeling, texturing and lighting information, introduction and interface of sculpting software. (4 periods)
Unit II	Character Modeling and Bird Wing Modeling Lip modeling, nose modeling, Eye modeling, Ear modeling, face modeling, body modeling, cloth modeling, and Bird wing modeling. (4 periods)
Unit III	UVs mapping on 3D model Human model texturing, bird wing model texturing. (4 periods)
Unit IV	Normal and Displacement Map. Human model sculpting, Projection mesh and re-topology, Normal and displacement maps, texture maps.. (4 periods)
Unit V	Lighting and Rendering Human model lighting and rendering, Bird model lighting and rendering. (4 periods)

Reference Books:

1. Maya professional tips and techniques –Lee Iain, Sybex, 2007, ISBN-0470107405
2. 3ds Max 7.5 Project-Boris Kulagin, BPB publication, 2006, ISBN-1-931769-3-5
3. Digital modeling:- William Vaughan, New Riders publication, 1st edition, ISBN:- 978-0321700896

Any pertinent media (recorded lectures, YouTube, etc.) if relevant:

1. <https://www.youtube.com/watch?v=ik2OHLcwUU0>
 2. https://www.youtube.com/watch?v=GzDIxMnZ_Po
 3. <https://www.youtube.com/playlist?list=PLB0wXhrWAmCyxQQSMWfYuTRT1pntzCjY7>
 4. <https://www.youtube.com/watch?v=BiRZkkoq3M>
 5. <https://www.youtube.com/watch?v=t8YEPrE6Nfw>
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Programme: B.Sc. Animation

Semester: V

Practical

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
3ANI504	Illustration and Comic Design	20

Course Outcome.

1. Design illustration for story books, newspaper, magazine and interactive media.
2. Design illustration styles in various mediums (digital and physical).
3. Design illustration styles for story board, comic book and interactive comic book.
4. Recognize today's national and international trends of comic book and interactive comic book.

Course Content

Unit	Content
Unit I	Dynamic Drawing Understanding rhythm, force, balance in drawing, dynamic key poses, concept art by memory & from life. (4 periods)
Unit II	Various Illustrative Styles and Design Simple line drawing with plain colors, dynamic drawing with tint, tones, shades, halftone illustration, various styles for illustration, illustrations for print media, illustration for digital media. (4 periods)
Unit III	Drawing For Storyboard Illustration Frame composition with perspective, shade and light in frames, cinematic frames, editing rules and its application in frame, color and style application for story boarding. (4 periods)
Unit IV	Comic Book Art & Design Information about comic book, cover design, page layout and design, appropriate place utilization for story information and dialogue writing, dynamic styles and color application. (4 periods)
Unit V	Interactive Comic Book Art & Design Introduction, cover page layout, learning limited animation techniques, appropriate place utilization for story information and dialogue writing, dynamic styles and color application. (4 periods)

Reference Books:

1. Creative illustration: - Andrew Loomis, the Viking press publications, 1947, ISBN: 978-1845769284.
2. Drawing Cutting Edge Comics: - Christopher Hart, Watson-Guption publications, ISBN: 978-0823023974.
3. How to Draw Great-Looking Comic Book Women: - Christopher Hart, Watson-Guption, ISBN: - 978-0823023943.

Any pertinent media (recorded lectures, YouTube, etc.) if relevant:

1. <https://www.youtube.com/watch?v=t-crXRMju-Y>
 2. <https://www.youtube.com/watch?v=c0hyod51C0>
 3. <https://www.youtube.com/watch?v=vtpDwF2J25c>
 4. <https://www.youtube.com/watch?v=5KX7WpRVtVU>
 5. <https://www.youtube.com/watch?v=HbC3COF33k0>
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Programme: B.Sc. Animation

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Practical

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
3ANI505	Animation-IV	20

Course Outcome.

1. Implementing Biped and Quadruped actions.
2. Application of animation principles.
3. Understanding lip synchronization according to dialogue delivery.
4. Make use of action & emotion according to situation.
5. Infer multiple camera & its coordination according to scenes and sequences.

Course Content

Unit	Content
Unit I	Biped and Quadruped Actions Human: Walk, Run, Jump, Animal: Walk, Jump, gallop, Bird: flying, landing (4 periods)
Unit II	Animation Principles Timing, Follow through, Overlapping action and secondary action, weight and force, anticipation (4 periods)
Unit III	Dialogue and Facial Expression Construction of dialogues, facial expressions, dialogue with expressions. (4 periods)
Unit IV	Animation Acting Acting with rules of animation. (4 periods)
Unit V	Action Synchronization Actions sequence with multiple characters. (4 periods)

Reference Books:

1. Animator's Survival Kit:- Richard Williamson, Faber & Faber, 2002, 1st edition
2. Timing for animation:- Harold Whitaker, CRC press, 2009, 2nd Edition
4. Maya professional tips and techniques:- Lee Lainer, Sybex publication, 2007, ISBN:- 0470 107 405
5. 3DS Max 7.5 project Boris Kulagin, BPB Publication, 2006, ISBN: 1-931769-43-5.

Any pertinent media (recorded lectures, YouTube, etc.) if relevant:

1. <https://www.youtube.com/watch?v=uDqjldI4bF4>
 2. <https://www.youtube.com/watch?v=5zE4GhAPZYM>
 3. <https://www.youtube.com/watch?v=5f0ia2GwBsg>
 4. <https://www.youtube.com/watch?v=6w8gA10aGfg>
 5. <https://www.youtube.com/watch?v=BrEI7NROPuM&t=329s>
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Programme: B.Sc. Animation

Semester: V

Practical

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
3ANI506	Matte Painting-II	20

Course Outcome.

1. Design painted background for 2D animated films and digital interactive content.
2. Design 3D background for 3D animated films and digital interactive content.
3. Design photographic matt painting for live film, animated & TV Serials, digital and interactive content.
4. Design Matt painting for reality TV shows and live concerts.
5. Design matt painting for print media and merchandising.

Course Content

Unit	Content
Unit I	Introduction of Matt Painting Introduction about Painted and photographic matt painting, layout and color keys for conceptual Matt painting, technical requirements, and use of matt painting for feature film, serials, gaming, reality shows and live concert, uses of 3D content in Matt painting. (4 periods)
Unit II	Matte Painting for Live and Animated TV Serials For live: Introduction, layout, color keys, creating 3D content, image selection, resolution and application of images according to concept and action. For Animated TV serials: Introduction, layout, color keys, creating 2D and 3D content, painting styles (physical/digital), applications according to scene and sequences. (4 periods)
Unit III	Applications of Matte painting in Gaming Introduction, concept, layout, color keys, creating 2D and 3D content, styles, painting or mapping, applications according to scene and sequence. (4 periods)
Unit IV	Application of Matte painting in Reality Shows Introduction, concept, layout, color keys, creating 2D and 3D content, stylized painting for Digital presentation, applications of matt painting according to reality TV shows (4 periods)
Unit V	Matt painting for Live concerts Introduction, concept, layout, color keys, creating 2D and 3D content, stylized painting for Digital representation. (4 periods)

Reference Books:

1. Digital Matt painting handbook: - David B. Mattingly, Sybex publications, 2011, ISBN:- 978-0470922422.
2. The Techniques of Dylan Cole: Advanced Digital Matt Painting: - Dylan Cole, The Gnomon Workshop, 978-1597629621
3. Setting up yours shots:- Great camera moves every filmmaker should know :- Jeremy vineyard Michael wise productions ,1999, ISBN:-0941188736
4. Layout and composition for Animation: - Ed Ghertner, Focal Press, 2010, 1st Edition, ISBN:- 978-0240814414

Any pertinent media (recorded lectures, YouTube, etc.) if relevant:

1. <https://www.youtube.com/watch?v=43dJsnIIrYQ>
 2. <https://www.youtube.com/watch?v=kc3HGgrAe0w>
 3. <https://www.youtube.com/watch?v=sqhgfsTBZtE>
 4. <https://www.youtube.com/playlist?list=PLkZqA5EJ8ALimhwMMD20a2yofUi9FRqm4>
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Programme: B.Sc. Animation

Semester: V

Practical

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
3ANI507	Rigging & Blend shapes-III	20

Course Outcome.

1. Illustrate advanced character and props rigging.
2. Demonstrate advanced mechanical rigging.
3. Practice advanced blend shapes.
4. Illustrate winged character rigging.
5. Illustrate realistic character muscles and skinning.

Course Content

Unit	Content
Unit I	Advance Mechanical Rigging Transform Character/Object Rigging, Mechanical Character/Object Rigging (4 periods)
Unit II	Wing Mechanism. Wing Part Rigging, Wing Part Skinning (4 periods)
Unit III	Advance Cartoon Rigging. Adding Exaggeration, Connecting Extra Props (4 periods)
Unit IV	Realistic Character Rigging. Implementing Realistic Character Rigging (4 periods)
Unit V	Realistic Character Muscles & Skinning. Implementing Realistic Character Muscle, Realistic Character Skinning (4 periods)

Reference Books:

1. Maya professional tips and techniques:-Lee Lainer, sybex,2007, ISBN:- 0470107405
2. 3DS Max 7.5 project Boris Kulagin, Bpb Publication 2006, ISBN: - 1-931769-43-5.
3. Character rigging and Animation: - Alias wave front publication, 2002, ISBN: - 9780973005233.

Any pertinent media (recorded lectures, YouTube, etc.) if relevant:

1. <https://www.youtube.com/playlist?list=PLDXGa6BGbkDicDfh2ptH4xWzVeuELbxzbz>
 2. <https://www.youtube.com/watch?v=ZbCufRuM5Dk>
 3. <https://www.youtube.com/playlist?list=PLL3OEv6vd5VBh8vnehdp2ITpE0q8jAeo>
 4. <https://www.youtube.com/playlist?list=PLgala72Uap1rYD3m7Z6BpzNpdIQzgVtsM>
 5. <https://www.youtube.com/watch?v=vQNbaYeZPN4&t=684s>
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Programme: B.Sc. Animation

Semester: V

Practical

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
3ANI508	Dynamics & Compositing	20

Course Outcome.

1. Describe the fundamental of compositing.
2. Practice Compositing tools.
3. Describe the fundamentals of visual effects.
4. Illustrate use of compositing in 3D animated and live films.

Course Content

Unit	Content
Unit I	Introduction to Compositing (VFX). Concepts, features and uses of compositing. (4 periods)
Unit II	Fundamentals of Compositing. Masking, Roto, Keying, Wire Removal (4 periods)
Unit III	Fundamentals of VFX. Tracking, Plate Making, Color Correction (4 periods)
Unit IV	Compositing. 2D compositing, 3D compositing (4 periods)
Unit V	Advance Compositing & VFX. Motion Graphic, Special Effects Scene 1 (External Plugins), Special Effects Scene 2 (External Plugins) (4 periods)

Reference Books:

1. Adobe After Effects CC Classroom:- Lisa Fridsma, Brie Gyncild, Adob Press, 2018, ISBN-13: 978-0-13-466532-0
2. Nuke 101: Professional Compositing and Visual Effects: - Ron Ganbar, Pearson Education, 2011, ISBN- 0321733479.
3. Professional Digital Compositing:- Lanier Lee, John Wiley and Sons Ltd, ISBN- 9780470452615

Any pertinent media (recorded lectures, YouTube, etc.) if relevant:

1. Masking - https://www.youtube.com/watch?v=e9Pijsu9_fs
 2. https://www.youtube.com/watch?v=Tr1YIX_SZW4
 3. <https://www.youtube.com/watch?v=2OsQM465Br4>
 4. <https://www.youtube.com/watch?v=gv9-91OzeZk>
 5. <https://www.youtube.com/watch?v=sfkaCESPE5c>
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Programme: B.Sc. Animation**Semester: VI****Practical**

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
3ANI601	Pre-Production	20

Course Outcome.

1. Describe the fundamental of compositing.
2. Practice Compositing tools.
3. Describe the fundamentals of visual effects.
4. Illustrate use of compositing in 3D animated and live films.

Course Content

Unit	Content
Unit I	Concept Design Identifying idea, creating concept, concept development, and research. (4 periods)
Unit II	Pre-production Planning Study of people, culture, monument, costumes, script, people psychology and their working style, their physique and face cut, their virtue, nature and natural element, environment, local language, local stories, according to research, design an illustration and concept art, color keys, portrait paintings and nature drawing. (4 periods)
Unit III	Story Development Creating short story, story development and research. (4 periods)
Unit IV	Screenplay Design Define story, characters, locations, era, timing, culture, monuments, language, costume, direction, cinematography and editing rules. (4 periods)
Unit V	Dialogue Development Study subject and genre of the film, understanding the local language, culture, local thought, phrases, description of situation and timing, study public trends and psychology, final dialogue designing from this study. (4 periods)

Programme: B.Sc. Animation

Semester: VI

Practical

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
3ANI602	Pre-Production	20

Course Outcome.

1. Designing and modeling of 2D, 3D Character & Props.
2. Designing & Modeling Layout, background.
3. Development of Concept art & Color Keys.
4. Development of Story Board design & 3D staging.
5. Compose Key VFX design & lighting setup for production purpose.

Course Content

Unit	Content
Unit I	Character and Prop Modelling 2D Character & prop designing, color keys character & props, final chart of character & props, clay modeling. 3D character & props modeling, texturing, rigging, general lighting with Blend shapes. (4 periods)
Unit II	Layout & Background Design & 3D Modeling Blue Sketches of BG, layouts, conceptual key BG design, 3D BG Modeling, texturing, general lighting, rigging. (4 periods)
Unit III	Story Board Design & 3D Staging Sound Breakdown & writing bar sheet, Sequence & Scene separation from screen play, calculating actions & dialogue timing for making storyboard with proper information for every sequence & scene. 3D staging:-3D story board with proper information of actions, dialogues, lighting, VFX & SFX, required timing for every sequence and scene. (4 periods)
Unit IV	Concept Art & Color Keys Key Concept art design for understanding film color scheme, composition & lighting. (4 periods)
Unit V	VFX & SFX Design & Technical Know how Study dynamics for VFX & SFX design, creating hair, fur, clothes, rendering and compositing every scene. (4 periods)

Programme: B.Sc. Animation

Semester: VI

Practical

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
3ANI604	Production	20

Course Outcome.

1. Create live action to animation as a part of film making project.
2. Create lighting and develop dynamic effects as a part of film project.
3. Create VFX and SFX as a part of film project.
4. Combine all the film related element and render it as a sequence of film project.

Course Content

Unit	Content
Unit I	Animation Shooting live action as a reference for animation, thumbnails, creating keys to in-between, 2D, 3D animation facial expressions and lip sync. (4 periods)
Unit II	Lighting Creating dome lighting and setup (digital), understanding lighting and texture mapping (4 periods)
Unit III	Dynamics, VFX and SFX Creating particular digital effects by using dynamics, creating digital and physical effects as VFX and SFX. (4 periods)
Unit IV	Compositing and Final Rendering Introduction about compositing software and its applications, compilation of BG and Matt painting, animation, dynamic effects and VFX, application of lighting and composition scene by scene. (4 periods)
Unit V	Rendering Introduction about advanced rendering software and its applications, rendering layer to layer for final scene composition. (4 periods)

Programme: B.Sc. Animation

Semester: VI

Practical

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
3ANI605	Post-Production	20

Course Outcome.

1. Use of offline editing for final music dubbing.
2. Create appropriate music, voice dubbing & effects.
3. Use of online editing for online effects and include music, voice dubbing & voice effects in film.
4. Create appropriate color schemes according to subject.
5. Produce final output of the film for feature film, video or any interactive media.

Course Content

Unit	Content
Unit I	Offline Editing Introduction of editing software and hardware, choose final shots, compile final shots according to story & screenplay, and create timeline for final music, voice dubbing and voice effects.
Unit II	Voice and Music Voice recording, dubbing, music, voice effects & background scene.
Unit III	Online editing Introduction about online editing software and hardware, online editing & music, voice effects compilation, online video effects (VFX), color correction.
Unit IV	Final output Scene by scene rendering, telisine and reverse telisine, output for films and video.
Unit V	Film promos Creating promos for films, television promotions. (4 periods)

Programme: B.Sc. Animation

Semester: VI

Practical

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
3ANI606	Presentation & Viva	20

Course Outcome.

6. Use of offline editing for final music dubbing.
7. Create appropriate music, voice dubbing & effects.
8. Use of online editing for online effects and include music, voice dubbing & voice effects in film.
9. Create appropriate color schemes according to subject.
10. Produce final output of the film for feature film, video or any interactive media.

Course Content

Unit	Content
Unit I	Bible Students shall prepare bible consist of story and concept, screenplay, storyboard, character sheet, props sheet, layout design, BG Design, attitudes sketches, final film snapshots.
Unit II	Final Output Final edit video with online effects and final music.
Unit III	Film Promotion Strategies for traditional marketing, Strategies for online film promotion, New ideas for marketing and merchandising.
Unit IV	Film Festivals Knowledge of regional, national and international film festivals.
Unit V	Project Presentation Complete presentation of film project