Karmaveer Bhaurao Patil University, Satara
Faculty of Science and Technology
B. Sc. (Animation Science)
Programme and Credit Structure as per NEP 2020

{Ref. Government of Maharashtra letter no. एनइपी.२०२२/प्र.क.०९/विशि-३शि का ना दिनांक: १३ मार्च २०२४}

The degree shall be titled as 'Bachelor of Science [Animation Science) under the faculty of Science and Technology

B. Sc. Sem. I & II from Academic Year 2024-25
B. Sc. Sem. III & IV from Academic Year 2025-26
B. Sc. Sem. V & VI from Academic Year 2026-27
B. Sc. Sem. VII&VIII from Academic Year 2027-28

Programme Outcomes for B. Sc. (Animation Science)

PO. No.	Programme Outcomes After completing B. Sc. (Animation Science) Programme the students will be able to……….
PO-1	identify and recall fundamental concepts and principles of Animation Science.
PO-2	explain and interpret theoretical and practical aspects of Animation Science, demonstrating a thorough understanding of its key elements.
PO-3	apply critical thinking and problem-solving skills to analyze animation projects, fostering a scientific and curious mindset.
PO-4	break down and examine animation techniques, experimenting with various methods and utilizing industry-standard tools and materials.
PO-5	integrate and synthesize scientific and artistic concepts, facts, and phenomena to develop innovative solutions within the context of animation.
PO-6	awareness about the impact of animation on natural resources and the environment, promoting sustainable practices in the industry.
PO-7	apply acquired knowledge in animation to various sectors, making them self-reliant and ready for industry challenges.
PO-8	develop a scientific attitude towards research in animation, fostering a positive approach to innovation and creativity.
PO-9	understanding of environmental sustainability goals, and how animation can contribute positively to these efforts.
PO-10	understanding of Animation Science, emphasizing its diverse applications across industries such as IT, automotive, mechanical, web development, VFX, graphic design, and film.
PO-11	proficient in the latest animation software and tools, This technical training is integral to their success in the animation industry.
PO-12	identify current industry trends and the evolving needs of the animation sector for both basic applied approaches to Animation Science.
PO-13	insights into the global animation industry, including emerging trends in India, where the field is rapidly growing and offering significant employment opportunities.
PO-14	coordinate logistics, marketing, and sponsorships for animation events
PO-15	analyze the impact of cultural, social, and environmental values on animation production.

PSO. NO	Programme Specific Outcomes The student will be able to…
PSO-1	understand and apply the principles of typography and layout in digital design.
PSO-2	apply color psychology to enhance storytelling in animation projects.
PSO-3	perform and design experiments and projects related to animation techniques and technologies.
PSO-4	analyse the interactions between animated and real-world elements, and their impact on audiences and environments.
PSO-5	utilize operating systems and essential software for animation production and apply object-oriented programming concepts in C++ to develop animation tools.
PSO-6	create and rig 2D characters for animation in software like Toon Boom or Adobe Animate
PSO-7	apply principles of inverse kinematics and weight distribution in character rigs.
PSO-8	design and execute projects that demonstrate a deep understanding of animation science and its applications.
PSO-9	apply principles of animation using computer-based tools like Adobe Animate or Toon Boom
PSO-10	implement responsive web design principles for various devices.
PSO-11	create accurate 3D models of architectural structures for visualization.
PSO-12	apply rotoscoping techniques for visual effects integration in film and animation.
PSO-13	analyze data to inform the development of animation projects and business strategies.
PSO-14	apply principles of usability, accessibility, and aesthetics in UI/UX design.
PSO-15	develop AI-driven tools or algorithms to streamline animation production processes.
PSO-16	develop business plans for starting and managing an animation studio or company.

Semester, Credit Framework, NSQF Level and Exit Points

Sr. No.	Semester	Year	Year	Credits	Level	Exit Points &Award
1	Sem. I & II	2024-25	1Year	44	4.5	UG Certificate in Animation Science
2	Sem. III & IV	2025-26	2Year	88	5.0	UG Diploma in Animation Science
3	Sem. V &VI	2026-27	3Year	132	5.5	B. Sc. in Animation Science (UG Three Year Degree)
4	Sem. VII & VIII	2027-28	4Year	176	6.0	B. Sc. in Animation Science [Honors/Research] (UG Four Year Degree)

Credit Distribution

Sr. No.	Course	3 Year Degree Programme			4 Year Honors Degree Programme			4 Year Honors with Research Degree Programme		
		Courses	Credits	%	Courses	Credits	%	Courses	Credits	%

		(3 Yr)	(3 Yr)		(4 Yr)	(4 Yr)		(4 Yr)	(4 Yr)	
1	Major	26	52	39.39	34	80	45.45	32	72	40.91
2	Elective	04	08	6.06	08	16	9.09	08	16	9.09
3	IKS	02	04	3.03	02	04	2.27	02	04	2.27
4	VSC	04	08	6.06	04	08	4.55	04	08	4.55
5	FP	01	02	1.52	01	02	1.14	01	02	1.14
6	OJT	01	04	3.03	02	08	4.55	01	04	2.27
7	RP	00	00	0.00	00	00	00	02	12	6.82
8	SEC	03	06	4.55	03	06	3.41	03	06	3.41
9	CEP	01	02	1.52	01	02	1.14	01	02	1.14
Total (Major) (A)		**42**	**86**	**65.15**	**55**	**126**	**71.59**	**54**	**126**	**71.59**
1	Minor & RM	12	24	18.18	13	28	15.91	13	28	15.91
Total (Minor) (B)		**12**	**24**	**18.18**	**12**	**28**	**15.91**	**13**	**28**	**15.91**
1	OE	04	08	6.06	04	08	4.55	04	08	4.55
2	AEC	04	08	6.06	04	08	4.55	04	08	4.55
3	VEC	02	04	3.03	02	04	2.27	02	04	2.27
4	CC	01	02	1.52	01	02	1.14	01	02	1.14
Total (C)		**11**	**22**	**16.67**	**11**	**22**	**12.50**	**11**	**22**	**12.50**
Grand Total (A+B+C)		**65**	**132**	**100**	**79**	**176**	**100**	**78**	**176**	**100**

Duration:

> The program shall be a full-time program.
> The duration of program shall be three years for Bachelor of Science and four years for Bachelor of Science with Honors or Bachelor of Science with Research.
> Every year students will have exist option with:
> (1st Year: Certificate, 2nd Year: Diploma, 3rd Year: Degree, 4th Year: Honors / Research)
> These students are allowed to re-enter the degree program within three years and complete the degree program within the stipulated maximum period of Seven Years.

Eligibility: 12th Pass with Science or equivalent.

Medium of Instruction: The medium of instructions shall be in English.

Scheme of Examination & Standard of Passing (CCE and ESE):

(As per the decision of the concern Board of Studies or Competent Authority)

> End Semester Exam (ESE): 30 Marks (Min 12 Marks for Passing)
> Continuous Comprehensive Evaluation (CCE): 20 Marks (Min 08 Marks for Passing)
> Total Marks = 50 Marks
> Minimum 40% Marks Required for Passing and there is separate head of Passing for End Semester Examination (ESE) and Continuous Comprehensive Evaluation (CCE).
> A candidate who acquire 32 credits or more during semester – I & II shall be admitted to B. Sc. II (appear for semester – III & IV examination).
> However the candidate shall not be admitted to B.Sc. III (Semester - V) unless he/she passed in all the subjects at B.Sc. I (Semester - I & Semester - II) and acquire 32 credits or more during semester – III & IV.
> However the candidate shall not be admitted to B. Sc. IV (Semester - VII) unless he/she passed in all the subjects at B. Sc. II and III (Semester – III to Semester - VI).
> However under the National Education Policy the rules extended by KBP University, time to time regarding ATKT will be applicable.

Eligibility of the Core Faculty:

> As per rules and regulations of Karmaveer Bhaurao Patil University, Satara and Govt. of Maharashtra.

Eligibility for Professor of Practice or Professional Trainer:

> Any other eligibility as per the guidelines and regulations passed by concern board of studies, academic council of the autonomous college and rules & regulations of Karmaveer Bhaurao Patil University, Satara and Government of Maharashtra and UGC norms.

Karmaveer Bhaurao Patil University, Satara
Faculty of Science and Technology

B. Sc. (Animation Science) Part-I

Semester I				
Sr. No.	Components	Course Code	Course Title	Credits
1	Course-I	BAST 111	Animation visual Art	02
		BAST 112	Digital Graphics	02
		BASP 113	Lab Course based on BAST 111 & BAST 112	02
2	Course-II	BAST 114	Fundamentals of Computer	02
		BAST 115	Procedural Programming language	02
		BASP 116	Lab Course based on BAST 114 & BAST 115	02
3	Course-III	BAST 117	Anatomy	02
		BAST 118	Color theory	02
		BASP 119	Lab Course based on BAST 117 & BAST 118	02
4	OE	BASTOE 1	Indian Musical Instruments	02
5	IKS	BASTIKS 1	Introduction to Indian Knowledge System	02
Total				**22**

Semester II				
Sr. No.	Components	Course Code	Course Title	Credits
1	Course-I	BAST 121	Computer Graphics	02
		BAST 122	Sound Editing	02
		BASP 123	Lab Course based on BAST 121 & BAST 122	02
2	Course-II	BAST 124	Web Designing	02
		BAST 125	Object Oriented Programming C++	02
		BASP 126	Lab Course based on BAST 124 & BAST 125	02
3	Course-III	BAST 127	Computer-based 2D Animation	02
		BAST 128	Video editing	02
		BASP 129	Lab Course based on BAST 127 & BAST 128	02
4	OE	BASTOE 2	History of Indian Music	02
5	VEC	BASTVEC 1	Democracy, Good Governance and Constitution of India	02
Total				**22**

EXIT OPTION: Award of UG Certificate in Major **with 44 credits** & an additional 4 credits core NSQF Course/Internship OR Continue with Major & Minor.

B. Sc. (Animation Science) Part-II

Semester III				
Sr. No.	Components	Course Code	Course	Credits
1.	Major	BAST 231	Classical Animation	02
		BAST 232	3D Product Modeling	02
		BASP 233	Lab Course based on BAST 231 & BAST 232	02
2.	Minor	BAST 234	Python Programming	02

		BAST 235	Web Development	02
		BASP 236	Lab Course based on BAST 234 & BAST 235	02
3.	OE	BASTOE 3	Indian Music's	02
4.	VSC	BASPVSC 1	2D Digital Rigging	02
5.	SEC	BASPSEC 1	Character Designing	02
6.	AEC	BASTAEC 1	English	02
7.	IKS	BASTIKS 2	History of Computer in India	02
Total				**22**

Semester IV

Sr. No.	Components		Course	Credits
1	Major	BAST 241	Digital Animation	02
		BAST 242	3D Blender	02
		BASP 243	Lab Course based on BAST 241 & BAST 242	02
2	Minor	BAST 244	AI for Animation	02
		BAST 245	PHP	02
		BASP 246	Lab Course based on BAST 244 AI & BAST 245	02
3	OE	BASTOE 4	Indian Music's	02
4	VSC	BASPVSC 2	3D Max Animation	02
5	SEC	BASPSEC 2	Architectural modelling	02
6	AEC	BASTAEC 2	English	02
7	VEC	BASTVEC 2	Environmental Studies	02
Total				**22**

EXIT OPTION: Award of UG Diploma in Major and Minor with 88 Credits & an additional 4 credits core NSQF Course/ Internship OR Continue with Major & Minor

B. Sc. (Animation Science) Part-III

Semester V

Sr. No.	Components	Course Code	Course	Credits
1	Major	BAST 351	2D Game Design	02
2	Major	BAST 352	3D Maya Modelling & Texturing	02
3	Major	BAST 353	UI /UX	02
4	Electives	BAST 354 E-I	E- commerce	02
		BAST 354 E-II	Market research	
5	Major Lab	BASP 355	Lab Based on BAST 351, BAST 352 & BAST 353	02
6	Elective Lab	BASP 356 E -I	Lab Based on BAST 354 E- I	02
		BASP 356 E -II	Lab Based on BAST 354 E- II	
7	VSC	BASPVSC 3	3D Maya Rigging	02
8	AEC	BASTAEC 3	English	02
9	OJT	BASTOJT 1	On Job Training in Animation Science	04
10	CEP	BASTCEP 1	Community Engagement Programme in Animation Science	02
			Total	**22**

Semester VI

Sr. No	Components	Course Code	Course	Credits
1	Major	BAST 361	3D Game Design	02
2	Major	BAST 362	VFX (After effect)	02

3	Major	BAST 363	Dynamics and rendering	02
4	Electives	BAST 364 E-I	AR for Animation	02
		BAST 364 E-II	VR for Animation	
5	Major Lab	BASP 365	Lab Based on BAST 361, BAST 362 & BAST 363	02
6	Elective Lab	BASP 366 E-I	Lab Based on BAST 364 E-I	02
		BASP 366 E-II	Lab Based on BAST 364 E-II	
7	VSC	BASPVSC 4	Rotoscoping (silhouette)/	02
8	SEC	BASPSEC 3	Maya Character Animation	02
9	FP	BASTFP 1	Field Project in Animation Science	02
10	CC	BASTCC 1	Co-curricular Course in Animation Science	02
11	AEC	BASTAEC 4	English	02
			Total	**22**

EXIT OPTION: Award of UG Degree in Major with 132 credits OR Continue with Major & Minor.

B. Sc. (Animation Science) Part-IV Honors Degree

Semester VII				
Sr. No.	**Components**	**Course Code**	**Course**	**Credits**
1	Major	BAST 471	Advanced Graphics Designing	04
2	Major	BAST 472	Compositing And Editing	04
3	Major	BAST 473	Modern Art	04
4	Electives	BAST 474 E-I	Elements of Animation Designs	02
		BAST 474 E-II	Animation Business Marketing	
5	Major Lab	BASP 475	Lab Based on BAST 471, BAST 472 & BAST 473	02
6	Elective Lab	BASP 476 E-I	Lab Based on BAST 474 E-I	02
		BASP 476 E-II	Lab Based on BAST 474 E-II	
7	Minor	BAST 477	Research Methodology	04
			Total	**22**
Semester VIII				
Sr. No.	**Components**	**Course Code**	**Course**	**Credits**
1	Major	BAST 481	Z Brush Modeling	04
2	Major	BAST 482	Motion Graphics	04
3	Major	BAST 483	Advanced Blender Modelling and texturing	04
4	Electives	BAST 484 E-I	Digital Marketing for Animation	02
		BAST 484 E-II	Typography for Animation	
5	Major Lab	BASP 485	Lab Based on BAST 481, BAST 482 & BAST 483	02
6	Elective Lab	BASP 486 E-I	Lab Based on BAST 484 E-I	02
		BASP 486 E-II	Lab Based on BAST 484 E-II	
7	OJT	BASTOJT 2	On Job Training in Animation Science II	04
			Total	**22**

Award of Four year UG Honors Degree in Major and Minor with 176 credits.

B. Sc. (Animation Science) Part-IV Honors with Research Degree

Semester VII				
Sr. No.	**Components**	**Course Code**	**Course**	**Credits**
1	Major	BAST 471	Advanced Graphics Designing	04
2	Major	BAST 472	Modern Art	04
3	Electives	BAST 474 E - I	Elements of Animation Designs	04
		BAST 474 E - II	Animation Business Marketing	
4	Major Lab	BASP 475	Lab Based on BAST 471 & BAST 472	02
5	Minor	BAST 476	Research Methodology	04
6	RP	BASTRP 1	Research Project in Animation Science I	04
			Total	**22**
Semester VIII				
Sr. No.	**Components**	**Course Code**	**Course**	**Credits**
1	Major	BAST 481	Motion Graphics	04
2	Major	BAST 482	Advanced Blender Modelling and texturing	04
3	Electives	BAST 484 E - I	Digital Marketing for Animation	04
		BAST 484 E - II	Typography for Animation	
4	Major Lab	BASP 485	Lab Based on BAST 481 & BAST 482	02
5	RP	BASTRP 2	Research Project in Animation Science II	08
			Total	**22**
Award of Four year UG Honors Degree in Major and Minor with 176 credits.				

Chairman	Secretary	Chairman
BoS in Animation Science	Academic Council	Academic Council