

# **BIRLA INSTITUTE OF TECHNOLOGY**



## **CHOICE BASED CREDIT SYSTEM (CBCS) CURRICULUM**

*(Effective from Academic Session: Monsoon 2018)*

## **B.SC. ANIMATION & MULTIMEDIA**

**DEPARTMENT OF ANIMATION AND MULTIMEDIA**



## **Department of Animation and Multimedia**

Birla Institute of Technology, MESRA, Ranchi-835215 (India)

### **Institute Vision**

To become a Globally Recognized Academic Institution in consonance with the social, economic and ecological environment, striving continuously for excellence in education, research and technological service to the National needs.

### **Institute Mission**

- To educate the students at the Graduate, Post-graduate and Doctoral levels to effectively and efficiently perform challenging socially and economically relevant Scientific, Engineering and Managerial jobs in industry.
- To provide excellent research and development environment, infrastructure and facility to take up cutting edge Doctoral research programmes and relevant projects.
- To develop effective teaching-learning skills and state-of-the-art research potential, ability and attitude of the faculty.
- To bridge skill gaps, re-skill the learners and trainers in accordance to the emerging needs of Industry 4.0 education, and research and other emerging areas.

### **Department Vision**

Pursuit of excellence in order to be recognized as a pioneer and frontrunner in the field of Animation and Multimedia studies in the country; to be in consonance with the emerging and current socio-economic reality and simultaneously be responsive to our ecological environment and remain motivated to contribute to the Nation building process through excellence in research and development activities and being alert and responsive to the needs of Industry 4.0 as a national and a global mandate.

### **Department Mission**

- Enable students to achieve excellence both in skill and knowledge that is at par with industry especially Industry 4.0 standards and perform better in challenging situations
- To encourage cutting-edge, interdisciplinary and futuristic research in response to the needs of the Government, Industry and Society
- To nurture first generation entrepreneurs with innovative mind-set, responsive and adaptable to the broad range of industries including the fast-emerging Industry 4.0.
- To develop a curriculum where students will intrinsically understand the requirements and standards of the Industry and remain equipped to achieve the next level
- To provide excellent Consulting, and Research & Development facilities for faculty and students.
- To uphold the values of Personal Integrity and Social Responsibility

### **Program Educational Objectives (PEO)**

1. To develop Animation, Multimedia and Communication competence of the students to enable them to take up eminent and gainful position in the Industry and/or foray as first-generation entrepreneurs in the domain;
2. To impart professional education and training in the field of 2D& 3D Animation, Digital Games, Film Making, Post-production, Graphic Designing, User Interface Designing, Web & Apps Designing and Communication Education especially keeping in mind the needs of Industry 4.0;
3. To disseminate knowledge and information by facilitating industry-academia interface and continuing interaction with Alumni to meet the demand of quality education and creating an ecosystem relevant to the Nation building process;
4. To produce graduates who are socially responsible and capable of engaging in Lifelong learning; and
5. Create scholars involved and engaged in futuristic research and quality consulting.

### **Program Outcomes (PO)**

#### **On successfully completing the program, a graduate should be able to:**

- a) Apply the basic concepts of classical and emerging notions of Animation, Multimedia and Communication Studies and interdisciplinary knowledge to identify & analyse complex issues and arrive at solutions affecting contemporary organisations and the Industry.
- b) Initiate and participate in the change process and value creation across all levels.
- c) Identify suitable resources and utilise them optimally to respond efficiently to the needs of society, economy and the Nation building.
- d) Become effective decision makers committed to professional & personal ethics as well as social responsibility and be abreast of and qualified to respond to the needs and demands of Industry 4.0.

**BIRLA INSTITUTE OF TECHNOLOGY – MESRA, RANCHI**  
**NEW COURSE STRUCTURE– To be effective from Academic Session 2018-19**  
**Based on CBCS & OBE Model**  
**BACHELOR OF SCIENCE IN ANIMATION & MULTIMEDIA**

**SEMESTER WISE CREDIT DISTRIBUTION**

**The total minimum credits for completing Bachelor of Animation & Multimedia is 120**

<b>S. No</b>	<b>Semester</b>	<b>Course Category</b>	<b>Credits</b>	<b>Total</b>
1	FIRST	Programme Core	16	18
		Programme Electives	02	
2	SECOND	Programme Core	19	21
		Programme Electives	02	
3	THIRD	Programme Core	18	20
		Programme Electives	02	
4	FOURTH	Programme Core	17	19
		Programme Electives	02	
5	FIFTH	Programme Core	10	18
		Programme Electives	08	
6	SIXTH	Programme Core	08	24
		Programme Electives	08	
		Research Project	08	
<b>Total</b>				<b>120</b>

**BACHELOR OF SCIENCE IN ANIMATION & MULTIMEDIA**  
**SEMESTER WISE CREDIT DISTRIBUTION (Based on CBCS & OBE Model)**

Semester / Session of Study (Recommended)	Course Level	Course Code	Courses	Mode of delivery & credits <i>L-Lecture; T-Tutorial; P-Practical</i>			Total Credits <i>C - Credi ts</i>		
				L (Periods/wee k)	T (Periods/wee k)	P (Periods/wee k)			
<b>THEORY</b>									
<b>FIRST Monsoon</b>	<b>FIRST</b>	AM101	History of Animation	3	0	0	3		
		AM102	Introduction to Visual Studies	3	0	0	3		
		AM103	Introduction to Communication	3	0	0	3		
		AM104	Introduction to Multimedia	2	1	1	3		
		<b>LABORATORIES</b>							
		AM105	Experimental Animation	0	0	4	2		
		AM106	Introduction to 3D	0	0	4	2		
		<b>ELECTIVES (To be opted from List of SKILL DEVELOPMENT COURSES)</b>							
		PE(SEC -I)	Paper -I (Skill Enhancement Course)	-	-	-	2		
		<b>TOTAL</b>							<b>18</b>

Semester / Session of Study (Recommended)	Course Level	Course Code	Courses	Mode of delivery & credits			Total Credits <i>C - Credits</i>	
				<i>L-Lecture;</i>	<i>T-</i>	<i>P-</i>		
		<b>THEORY</b>						
<b>SECOND Spring</b>	<b>FIRST</b>	AM107	Principles of Animation	3	0	0	3	
		AM108	Theory of Visual Studies	3	0	0	3	
		AM109	Creative writing & Presentation Skills	2	0	2	3	
		AM110	Story Appreciation for Gaming	2	1	0	3	
		AM111	Introduction to Multimedia Tools	2	0	2	3	
		<b>LABORATORIES</b>						
		AM112	Film Appreciation	0	1	3	2	
		AM113	Emerging 3D Technologies	0	0	4	2	
		<b>ELECTIVES (To be opted from List of SKILL DEVELOPMENT COURSES)</b>						
		PE(SEC-II)	Paper -II (Skill Enhancement Course)	-	-	-	2	
<b>TOTAL</b>						<b>21</b>		

Semester / Session of Study (Recommended)	Course of Level	Course Code	Courses	Mode of delivery & credits			Total Credits C - Credits
				L (Perio ds/we ek)	T (Perio ds/we ek)	P (Peri ods/ week )	
<b>THIRD Monsoon</b>	<b>SECOND</b>	<b>THEORY</b>					
		AM201	Audio Visual Technology	3	0	0	3
		AM202	Visual Communication	2	0	0	2
		AM203	Basics of Programming	2	0	1	3
		AM204	Vector Art Study	2	0	2	3
		<b>LABORATORIES</b>					
		AM205	Animation Techniques	0	0	4	2
		AM206	Visual Studies	0	0	4	2
		AM207	3D Modeling Techniques	0	0	4	2
		<b>ELECTIVES (To be opted from List of SKILL DEVELOPMENT COURSES)</b>					
		PE(SEC-III)	Paper -III (Skill Enhancement Course)	-	-	-	2
<b>TOTAL</b>						<b>20</b>	



SEMESTER /Session of Study (Recommended)	LEVEL	Course Code	Courses	Mode of delivery & credits <i>L-Lecture; T-Tutorial; P-Practical</i>			Total Credits C-Credits	
				L (Periods/week)	T (Periods/week)	P (Periods/week)		
		<b>THEORY</b>						
<b>FOURTH Spring</b>	<b>SECOND</b>	AM208	Communication for Development	3	0	0	3	
		AM209	Graphics Design Communication	2	0	2	3	
		AM210	Research in Gaming	3	0	0	3	
		<b>LABORATORIES</b>						
		AM211	Advanced Animation Techniques	0	0	4	2	
		AM212	Visual Development	0	0	4	2	
		AM213	Digital Film Production	0	0	4	2	
		AM214	Advance 3D Modeling, Texturing, Lightning & Rendering	0	0	4	2	
		<b>ELECTIVES (To be opted from List of SKILL DEVELOPMENT COURSES)</b>						
		PE(SEC-IV)	Paper -IV (Skill Enhancement Course)	-	-	-	2	
<b>TOTAL</b>						<b>19</b>		

SEMESTER /Session of Study  (Recommended)	LEVEL	Course Code	Courses	Mode of delivery & credits <i>L-Lecture; T-Tutorial; P-Practical</i>			Total Credits C- Credits
				L (Periods/week)	T (Periods/week)	P (Periods/week)	
		<b>THEORY</b>					
<b>FIFTH Monsoon</b>	<b>THIRD</b>	AM301	Visual Narratives	2	1	0	3
		AM302	Compositing & VFX	2	0	2	3
		<b>LABORATORIES</b>					
		AM303	2D Digital Animation	0	0	4	2
		AM304	3D Animation, Rigging & Skinning	0	0	4	2
		<b>ELECTIVES (To be opted from List of Program Elective (PE))</b>					
		PEI	Paper -V Programme Elective	-	-	-	2
		PEII	Paper -V Programme Elective	-	-	-	2
		PEIII	Paper -V Programme Elective	-	-	-	2
		PEIV	Paper -V Programme Elective	-	-	-	2
<b>TOTAL</b>						<b>18</b>	

SEMESTER /Session of Study  (Recommended)	LEVEL	Course Code	Courses	Mode of delivery & credits <i>L-Lecture; T-Tutorial; P-Practical</i>			Total Credits C- Credits	
				L (Periods/week)	T (Periods/week)	P (Periods/week)		
SIXTH Spring	THIRD	<b>THEORY</b>						
		AM305	Direction for Animation	3	0	0	3	
		AM306	Motion Graphics	2	0	2	3	
		<b>LABORATORIES</b>						
		AM307	Advance 3D Dynamics	0	0	4	2	
		AM308	Degree Showcase Project				8	
		<b>ELECTIVES (To be opted from List of Program Elective (PE))</b>						
		PEV	Paper -VI Programme Elective	-	-	-	2	
		PEVI	Paper -VI Programme Elective	-	-	-	2	
		PEVII	Paper -VI Programme Elective	-	-	-	2	
		PEVIII	Paper -VI Programme Elective	-	-	-	2	
		<b>TOTAL</b>						<b>24</b>
		<b>TOTAL PROGRAM CREDITS</b>						<b>120</b>

PROGRAM ELECTIVES (LIST OF SKILL ENHANCEMENT COURSES)							
PE / LEVE L	Program me Elective (PE)	Code No	Name of the PE Course	Mode of delivery & credits			Total Credits
				L (Periods/we ek)	T (Periods/ week)	P (Periods/ week)	
1	PE(SEC-I)	AM114	Basic Drawing Skills	0	0	4	2
		AM115	Presentation Design	1	0	2	2
		AM116	Photography	0	0	4	2
		AM117	Game Appreciation	2	0	0	2
		AM118	Digital Animation	0	0	4	2
		AM119	Desktop Publishing	0	0	4	2
1	PE(SEC-II)	AM120	Basic Writing Skills	0	0	4	2
		AM121	Web Design	0	0	4	2
		AM122	Comic Illustration	0	0	4	2
		AM123	Product Modeling in 3D	0	0	4	2
		AM124	Lighting for Video Production	0	0	4	2
		AM125	Role of Multimedia Tools in Indian Art	0	0	4	2
2	PE(SEC-III)	AM126	Fiction Writing	0	0	4	2
		AM127	Calligraphy	0	0	4	2
		AM128	Architectural Modeling	0	0	4	2
		AM129	Basic Video Editing	0	0	4	2
		AM130	Game Design	0	0	4	2

2	PE(SEC-IV)	AM131	Science Communication	2	0	0	2
		AM132	3D Animation	0	0	4	2
		AM133	Matte Painting	0	0	4	2
		AM134	Sound Design	0	0	4	2
		AM135	Advertising Campaign Design	1	0	2	2

**LIST OF PROGRAM ELECTIVES (PE)**

				<b>Mode of delivery &amp; credits</b> <i>L-Lecture; T-Tutorial; P-Practical</i>			<b>Total Credits</b>
<b>PE / LEVEL</b>	<b>Program Elective (PE)</b>	<b>Code No</b>	<b>Courses</b>	<b>L (Periods /week)</b>	<b>T (Periods /week)</b>	<b>P (Periods/ week)</b>	<b>C</b>
3	PEI	AM335	Story Boarding	0	0	4	2
3		AM332	Documentary Film Making	0	0	4	2
3		AM333	Film & Documentary Script Writing	1	0	2	2
3	PEII	AM314	Character Design	0	0	4	2
3		AM315	Urban Sketching	0	0	4	2
3		AM317	Writing for Advertising	2	0	0	2
3		AM337	Fundamentals of Theatre and Acting	2	0	0	2
3	PEIII	AM326	Stop Motion	0	0	4	2
3		AM323	Classical Animation	2	0	0	2
3		AM319	3D Sculpting	0	0	4	2
3		AM320	3D Motion Graphics and Dynamics	0	0	4	2
3	PEIV	AM311	Magazine Design	0	0	4	2
3		AM328	Apps Creation	0	0	4	2
3		AM336	Digital Painting	0	0	4	2
3	PEV	AM324	VFX in 2D Animation	0	0	4	2
3		AM325	Production Design	2	0	0	2
3		AM322	3D Compositing for Camera	0	0	4	2

3	PEVI	AM309	Storytelling Using Multimedia	0	0	4	2
3		AM312	Graphic Novel	2	0	0	2
3		AM316	Participatory Communication	2	0	0	2
3		AM318	Media Studies	0	0	4	2
3	PEVI I	AM327	Game Making in Blender	0	0	4	2
3		AM329	Advance Game Engine	0	0	4	2
3		AM330	Game Design Documentation	0	0	4	2
3		AM310	UI & UX Designing	0	0	4	2
3	PEVI II	AM331	Film Production Design	0	0	4	2
3		AM313	Layout Design	0	0	4	2
3		AM321	Product Designing and Visualization	0	0	4	2