



**B.SC. COMPUTER SCIENCE**  
**WITH SPECIALIZATION GAMING DESIGN**  
**(Duration: 3 Years)**

**CURRICULUM**

**Under Choice Based Credit system**  
**(In line with NEP 2020)**

**(Applicable for Students admitted from Academic Year 2023-24)**

**DEPARTMENT OF COMPUTER APPLICATIONS**  
**SCHOOL OF LIBERAL ARTS AND APPLIED SCIENCES**  
**HINDUSTAN INSTITUTE OF TECHNOLOGY AND SCIENCE**

<b>B.SC COMPUTER SCIENCE (Gaming Design) - CURRICULUM - 2023-24 (In line with NEP 2020)</b>											
<b>SEMESTER I</b>											
<b>SL. NO</b>	<b>SEM</b>	<b>COURSE CATEGORY</b>	<b>COURSE TYPE</b>	<b>COURSE CODE</b>	<b>NAME OF THE COURSE</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>	<b>S</b>	<b>TCH</b>
1	I	CC	TH	AGD11001	Multimedia Systems Design	3	0	0	3	2	3
2	I	CC	TP	ACS11001	Python Programming	2	0	2	3	2	4
3	I	CC	TP	ACA31004	Data Structures	2	1	2	4	2	5
4	I	BS	TH	GMA31001	Mathematics for computer Science	3	1	0	4	2	4
5	I	HS	TP	GLS51001	Communication Skills	2	0	1	2	1	3
6	I	HS	TP	GLS11001	Tamil Art and Culture	1	0	1	1	2	2
7	I	VA	TH	GGE51003	Environmental Science and Sustainable Development	2	0	0	2	2	2
8	I	HS	PR	GBP01400	Health and Wellbeing	0	0	2	1	2	2
		VA		GPE21401	Yoga						
				GPE21402	Sports						
				GPE21403	Fitness						
				AVC31401	Fine Arts						
		HS		GGE51401	Outreach (NCC)-Level-I						
				GGE51402	Outreach (NSS, Y's-men, Rotaract)-Level-I						
9	I	NC	TP	ASS21001	Community Development	1	0	1	*	2	2
					<b>Total</b>	<b>16</b>	<b>2</b>	<b>9</b>	<b>20</b>	<b>17</b>	<b>27</b>

**L – Lecture; T – Tutorial; P – Practical; C – Credit; S- Self Study; TCH- Total Contact Hours \* indicates Non Credit course**

SEMESTER-II											
SL. NO	SEM	COURSE CATEGORY	COURSE TYPE	COURSE CODE	NAME OF THE COURSE	L	T	P	C	S	TCH
1	II	CC	TH	ACS11002	Design Analysis of Algorithms	2	1	0	3	2	3
2	II	CC	TH	AGD11002	2D Design	3	0	0	3	2	3
3	II	CC	TP	ACA31006	Database Management Systems	2	0	2	3	2	4
4	II	CC	TH	ACA31008	Operating Systems	2	1	0	3	2	3
5	II	HS	TP	GLS51002	Personality Development and Soft Skills	2	0	1	2	1	3
6	II	AE	TP	ACA31001	Digital Technological Solutions	2	0	2	3	2	4
7	II	HS	PR	GBP01400	Health and Wellbeing	0	0	2	1	2	2
		VA	PR	GPE21401	Yoga						
				GPE21402	Sports						
				GPE21403	Fitness						
				AVC31401	Fine Arts						
		HS	PR	GGE51401	Outreach (NCC) -Level-I						
				GGE51402	Outreach (NSS, Y's-men, Rotract)-Level-I						
8	II	HS	TH	GLS51008	Tamil	2	0	0	2	2	2
				GLS51009	Hindi						
				GLS51010	Telugu						
				GLS11002	Advanced Tamil						
<b>Total</b>						<b>15</b>	<b>2</b>	<b>7</b>	<b>20</b>	<b>15</b>	<b>24</b>

L – Lecture; T – Tutorial; P – Practical; C – Credit; S- Self Study; TCH- Total Contact Hours											
SEMESTER-III											
SL. NO	SEM	COURSE CATEGORY	COURSE TYPE	COURSE CODE	NAME OF THE COURSE	L	T	P	C	S	TCH
1	III	CC	TP	AGD11003	Digital Art	2	1	2	4	2	5
2	III	CC	TP	AGD11004	Game Interface Design	3	0	2	4	2	5
3	III	DE	TP	**	Department Elective-I	2	0	2	3	2	4
4	III	NE	TP	***	Non-Department Elective	2	0	2	3	2	4
5	III	HS	TH	GLS51011	French	2	0	0	2	2	2
				GLS51012	German						
				GLS51013	Spanish						
				GLS51014	Korean						
				GLS51015	Mandarin						
				GLS51016	Japanese						
6	III	HS	TP	GLS51005	Public Speaking	1	0	1	1	1	2
8	III	NC	TH	GGE51015	Indian Knowledge System	3	0	0	*	2	3
9	III	NC	TP	ABB31001	CSR & SDG	1	0	2	*	2	3
10	III	SI	IN	AGD11800	Internship		#		4		#
					<b>Total</b>	<b>16</b>	<b>1</b>	<b>11</b>	<b>21</b>	<b>15</b>	<b>28</b>
<b>L – Lecture; T – Tutorial; P – Practical; C – Credit; S- Self Study; TCH- Total Contact Hours # 15 days Internship carried out in the end of SEM II and evaluated in the SEM III * indicates Non Credit courses *** indicates Non Department Elective ** indicates Department Elective</b>											

SEMESTER-IV											
SL. NO	SEM	COURSE CATEGORY	COURSE TYPE	COURSE CODE	NAME OF THE COURSE	L	T	P	C	S	TCH
1	IV	CC	TP	ACA31011	Software Engineering	2	1	2	4	2	5
2	IV	CC	TH	AGD11005	Virtual Reality	3	0	0	3	2	3
3	IV	CC	TP	ACA31012	Mobile Application Development	2	0	2	3	2	4
4	IV	CC	TP	AGD11006	3D Animation	2	0	2	3	2	4
5	IV	SE	TP	AGD11007	HTML5 gaming Framework	1	0	2	2	2	3
6	IV	DE	TP	**	Department Elective-II	2	0	2	3	2	4
7	IV	HS	TH	GLS11003	French Intermediate	2	0	0	2	2	2
				GLS11004	German Intermediate						
				GLS11005	Spanish Intermediate						
				GLS11006	Korean Intermediate						
				GLS11007	Mandarin Intermediate						
				GLS11008	Japanese Intermediate						
8	IV	HS	TP	GLS51006	English for Competitive Examinations	1	0	1	1	1	2
<b>Total</b>						<b>15</b>	<b>1</b>	<b>11</b>	<b>21</b>	<b>15</b>	<b>27</b>
<b>L – Lecture; T – Tutorial; P – Practical; C – Credit; S- Self Study; TCH- Total Contact Hours ** Department Elective</b>											

SEMESTER-V											
SL. NO	SEM	COURSE CATEGORY	COURSE TYPE	COURSE CODE	NAME OF THE COURSE	L	T	P	C	S	TCH
1	V	CC	TP	ACS11010	Network and Data Security	3	0	2	4	2	5
2	V	CC	TH	ACS11011	Artificial Intelligence	3	1	0	4	2	4
3	V	CC	TH	ACS11012	Game Theory and Development	3	1	0	4	2	4
4	V	CC	TP	AGE21001	Fundamentals of Research Methodology	3	0	2	4	2	5
5	V	DE	TP	**	Department Elective-III	2	0	2	3	2	4
6	V	HS	TP	GLS51007	Verbal Reasoning and Interview Skills	1	0	1	1	1	2
7	V	NC	TH	AGE31001	Methodology for Writing a Professional & Scientific Article	1	0	0	*	2	1
					<b>Total</b>	<b>16</b>	<b>2</b>	<b>7</b>	<b>20</b>	<b>13</b>	<b>25</b>
<b>L – Lecture; T – Tutorial; P – Practical; C – Credit; S- Self Study; TCH- Total Contact Hours * indicates Non Credit course **indicates Department Elective</b>											

SEMESTER-VI											
SL. NO	SEM	COURSE CATEGORY	COURSE TYPE	COURSE CODE	NAME OF THE COURSE	L	T	P	C	S	TCH
1	VI	CC	TH	ACS11014	AR Game Development	3	1	0	4	2	4
2	VI	CC	TH	ACS11016	Game Environment	3	1	0	4	2	4
3	VI	CC	TH	ACA31013	Cyber Security	3	0	2	4	2	5
4	VI	DE	TP	**	Department Elective -IV	2	0	2	3	2	4
5	VI	NC	TH	GGE51011	Introduction to Women and Gender Studies	3	0	0	*	2	3

6	VI	HS	TH	GGE51001	Universal Human Values	2	0	0	2	2	2
7	VI	RP	PJ	AGD11801	Project	0	0	14	7	0	14
					<b>Total</b>	<b>16</b>	<b>2</b>	<b>18</b>	<b>24</b>	<b>12</b>	<b>36</b>

**L – Lecture; T – Tutorial; P – Practical; C – Credit; S- Self Study; TCH- Total Contact Hours \*\* indicates Department Elective \*indicates Non Credits Course**


### LIST OF DEPARTMENT ELECTIVES

SL. NO	SEM	COURSE CATEGORY	COURSE TYPE	COURSE CODE	NAME OF THE COURSE	L	T	P	C	S	TCH
<b>Elective-I</b>											
1	III	DE	TP	AGD11500	Principles of Game Theory	2	0	2	3	2	4
2	III	DE	TP	AGD11501	Color Theory	2	0	2	3	2	4
<b>Elective-II</b>											
3	IV	DE	TP	AGD11502	Introduction to Multimedia Design	2	0	2	3	2	4
4	IV	DE	TP	AGD11503	2D Gaming Production	2	0	2	3	2	4
<b>Elective-III</b>											
5	V	DE	TP	AGD11504	Hardware in Game Programming	2	0	2	3	2	4
6	V	DE	TP	AGD11505	Business and Legal issues for Video Game Developers	2	0	2	3	2	4
<b>Elective-IV</b>											
7	VI	DE	TP	AGD11506	3D Character Development	2	0	2	3	2	4
8	VI	DE	TP	AGD11507	Principles of Sound Design	2	0	2	3	2	4

<b>L – Lecture; T – Tutorial; P – Practical; C – Credit; S- Self Study; TCH- Total Contact Hours</b>											
<b>NON-DEPARTMENT ELECTIVES</b>											
<b>SL. NO</b>	<b>SEM</b>	<b>COURSE CATEGORY</b>	<b>COURSE TYPE</b>	<b>COURSE CODE</b>	<b>NAME OF THE COURSE</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>	<b>S</b>	<b>TCH</b>
1	III	NE	TP	AGD11700	Image Editing Tools	2	0	2	3	2	4
<b>L – Lecture; T – Tutorial; P – Practical; C – Credit; S- Self Study; TCH- Total Contact Hours</b>											