



**Dr. M.G.R.**  
**EDUCATIONAL AND RESEARCH INSTITUTE**  
**DEEMED TO BE UNIVERSITY**



University with Graded Autonomy Status  
(An ISO 21001 : 2018 Certified Institution)  
Periyar E.V.R. High Road, Maduravoyal, Chennai-95. Tamilnadu, India.

**FACULTY OF HUMANITIES AND SCIENCE**

**LEARNING OUTCOME BASED CURRICULUM**

**Curriculum and Syllabus**

**B.Sc (Game Art & Design)**

**(For Students Admitted From 2023-24 Onwards)**

**DEPARTMENT OF VISCOM & ANIMATION**

## **DECLARATION**

I, **JEEVALATHA .G**, Head of **Viscom & Animation Department**, hereby declare that this copy of the syllabus (**B.Sc Game Art & Design**), Full time (**2023 Regulation**) from Page no 1 to 139 is the final version which is being taught in the class and uploaded in our University website. I assure that the Syllabus available in our University website is verified and found correct. The Curriculum and Syllabi have been approved by our Academic Council / Vice Chancellor.

**Date:**

**Signature**

## **VISION**

To produce well knowledgeable Media and Animation professionals who will bring name and fame to the media industry through their culture conscious skills.

## **MISSION**

**M1:** To impart quality training in accordance to the industry standards by providing robust curriculum.

**M2:** To motivate and enhance students creativity by providing real time practice which increases their creative-thinking skills.

**M3:** To promote leadership, entrepreneurship skills and cognizance about ethical values.

**M4:** To inculcate employability through industry collaboration and value added courses.

## **PROGRAMME EDUCATIONAL OBJECTIVES**

**PEO 1** - Students will be proficient in Film technology which includes Direction, Screen Play Writing, Cinematography, Editing, Sound Recording & Sound Designing and Acting.

**PEO 2** -Students will successfully lead a team with having different type of diverse members and divergent conditions of working.

**PEO 3**– Students will be creating, adopting and absorbing new technology and social system and values in the face of ever changing professional requirements through lifelong learning attributes.

## **PROGRAMME SPECIFIC OUTCOMES**

**PSO-1:** Students will sharpen their skills of storytelling in cinematic forms with aesthetic values and will also know how to work with team members.

**PSO-2:** Students will explore, visualize and practice the art of visual storytelling through camera.

**PSO-3:** Students will sharpen their skills in editing and sound designing to gain a comprehensive knowledge of the practices, means of artistic expression and become efficient in their related technical equipment and software.

## **PROGRAMME OUTCOMES**

**PO1: Disciplinary Knowledge:** Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of the undergraduate programme of study.

**PO2: Communication Skills:** Ability to understand and express thoughts and ideas effectively in writing and orally; to present complex information in a clear and concise manner to different groups.

**PO3: Critical thinking and Problem solving:** Capability to analyze and evaluate evidence, arguments, claims, beliefs on the basis of empirical evidence; formulate coherent arguments; critically evaluate practices, policies and theories by following scientific approach to knowledge development and apply their competency to solve different kinds of problems and apply to real life situations.

**PO4: Analytical and Scientific reasoning:** Ability to analyze, interpret and draw conclusions from quantitative/qualitative data; and critically evaluate ideas, evidence and experiences from an open-minded and reasoned perspective.

**PO5: Research-related skills:** Ability to recognize cause-and-effect relationships, define problems, formulate hypotheses, test hypotheses, analyze, interpret and draw conclusions from data, ability to plan, execute and report the results of an experiment or investigation.

**PO6: Team work and Leadership qualities:** Function effectively as an individual, and as a team member or leader in diverse teams, and in multidisciplinary environment.

**PO7: Information/digital literacy:** Capability to use ICT tools in a variety of learning situations, demonstrate ability to access, evaluate, and use a variety of relevant information sources; and use appropriate software for analysis of data and further presentation.

**PO8: Moral and ethical awareness:** Ability to embrace moral/ethical values in conducting one's life, formulate a position/argument about an ethical issue from multiple perspectives, and use ethical practices in all work. Appreciating environmental and sustainability issues and adopting objective, unbiased and truthful actions in all aspects of work.

**PO9: Lifelong learning:** Ability to update knowledge and skills, participating in learning activities throughout life, through self-paced and self-directed learning aimed at personal development, meeting economic, social and cultural objectives.

## PEO WITH MISSION STATEMENT MAPPING

	M1	M2	M3	M4
PEO 1	3	3	3	3
PEO 2	3	3	3	3
PEO 3	3	3	3	3

## PEO -PO MAPPING

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9
PEO 1	3	3	2	2	2	3	3	3	3
PEO 2	3	3	3	2	2	2	3	3	3
PEO 3	3	3	2	2	2	2	3	3	3

## PEO - PSO MAPPING

	PSO 1	PSO 2	PSO 3
PEO 1	3	3	3
PEO 2	3	2	3
PEO 3	3	3	3

Strength of correlation  
3-High, 2-Medium, 1-Low

I SEMESTER							
		Title of the Subject					
S.N O	Sub.Code	THEORY	C	L	T/SLr	P/R	Ty/Lb/ ETP/IE
1	HBTA22001/ HBHI22001/ HBFR22001	Tamil/Hindi/French – I	3	3	0/0	0/0	Ty
2	HBEN22001	English – I	3	3	0/0	0/0	Ty
3	HBAV22ID1	Allied-I-Anatomy Drawing	3	2	0/1	0/0	Ty
4	HBGA23001	Animation and Game Designing	4	3	1/0	0/0	Ty
5	HBCC22001	Environmental Studies	3	3	0/0	0/0	Ty
<b>PRACTICAL</b>							
6	HBAV23ET1	Visualization Techniques And Image Editing	3	2	0/0	2/0	ETP
7	HBGA23L01	Project I – Game Layout Designing	4	0	0/0	8/0	Lb
8	HBCC22I02	Soft Skill - I	1	0	0/0	2/0	IE

**Credits Sub Total:24**

II SEMESTER							
		Title of the Subject					
S.N O	Sub.Code	THEORY	C	L	T/SLr	P/R	Ty/Lb/ ETP/IE
1	HBTA22002/ HBHI22002/ HBFR22002	Tamil/Hindi/French – II	3	3	0/0	0/0	Ty
2	HBEN22002	English – II	3	3	0/0	0/0	Ty
3	HBGA23ID1	Allied-II- Concept Design for Game Character	3	2	1/0	0/0	Ty
4	HBGA23002	Mobile Layout - UI & UX Design	4	3	1/0	0/0	Ty
<b>PRACTICAL</b>							
5	HBGA23L02	Mobile Layout - UI & UX Design Lab	2	0	0/0	4/0	Lb
6	HBGA23L03	Project II – UI Designing for Game	4	0	0/0	8/0	Lb
7	HBCC22I03	Soft Skill -II	1	0	0/0	2/0	IE

**Credits Sub Total:20**

III SEMESTER							
		Title of the Subject					
S.NO	Sub.Code	THEORY	C	L	T/SLr	P/R	Ty/Lb/ETP/IE
1	HBAV22ID3	Allied -III Story Boarding	3	3	0/0	0/0	Ty
2	HBGA23003	Introduction to Unity 3D - Level 1	4	3	1/0	0/0	Ty
3	HBGA23004	3DCharacter Modeling	4	3	0/1	0/0	Ty
		<b>PRACTICAL</b>					
4	HBGA23ET1	Camera and Lenses	3	1	0/0	4/0	ETP
5	HBGA23L04	3DCharacter Modeling Lab	2	0	0	4/0	Lb
6	HBGA23L05	Project III –3D Game Character Model	4	0	0/0	8/0	Lb

**Credits Sub Total:20**

IV SEMESTER							
		Title of the Subject					
S.NO	Sub.Code	THEORY	C	L	T/SLr	P/R	Ty/Lb/ETP/IE
1	HBGA23005	Unity 3D -Level 2	4	3	0/1	0/0	Ty
2	HBGA23006	Advanced Character Modeling - Maya	4	3	1/0	0/0	Ty
		<b>PRACTICAL</b>					
3	HBGA23ET2	Advanced Character Animation - Maya	3	2	0/0	2/0	ETP
4	HBGA23L06	Advanced Character Modeling - Maya Lab	2	0	0/0	4/0	Lb
5	HBGA23L07	Project IV – 3D Game Character Rigging Animation	4	0	0/0	8/0	Lb
6	HBXX22OLX	Open Elective Lab	2	0	0/0	4/0	IE
7	HBFL22IXX	Foreign Language	1	0	0/0	2/0	IE

**Credits Sub Total:20**

V SEMESTER							
		Title of the Subject					
S.NO	Sub.Code	THEORY	C	L	T/SLr	P/R	Ty/Lb/ETP/IE
1	HBGA23ID2	Allied-IV- Substance Painter	3	2	0/1	0/0	Ty
2	HBGA23007	Unreal Engine for 3D	4	3	0/1	0/0	Ty
3	HBGA23008	Basics of Blueprint nodes	4	3	1/0	0/0	Ty
4	HBCC22002	Entrepreneurship Development	3	3	0/0	0/0	Ty
		<b>PRACTICAL</b>					
5	HBGA23ET3	Game Design for VR Application	3	2	0/0	2/0	ETP
6	HBGA23L08	Unreal Engine for 3D Lab	2	0	0/0	4/0	Lb
7	HBGA23L09	Project V- Environment Level designing	4	0	0/0	8/0	Lb

**Credits Sub Total:23**

VI SEMESTER							
		Title of the Subject		L	T	P	C
S.NO	Sub.Code	THEORY	C	L	T/SLr	P/R	Ty/Lb/ETP/IE
1	HBAA22008	Laws and Ethics for Animation	3	3	0/0	0/0	Ty
2	HBCC22ET1	Universal Human Values	3	2	0/0	2/0	ETP
		<b>PRACTICAL</b>					
3	HBGA23LXX	Internship - Elective 1	5	0	0/0	10/0	Lb
4	HBGA23LXX	Portfolio Development - Elective 2	12	0	0/0	24/0	Lb

**Credits Sub Total:23**

#### Summary Of Credits

<b>1<sup>st</sup> Semester</b>	<b>- 24</b>
<b>2<sup>nd</sup> Semester</b>	<b>-20</b>
<b>3<sup>rd</sup> Semester</b>	<b>-20</b>
<b>4<sup>th</sup> Semester</b>	<b>-20</b>
<b>5<sup>th</sup> Semester</b>	<b>-23</b>
<b>6<sup>th</sup> Semester</b>	<b>-23</b>

**Total -130**

**LIST OF ELECTIVES:**

S.NO	Sub.Code	Title of the Subject
1.	HBGA23L10	Mobile Game Creation- unity
2.	HBGA23L11	PC Game Creation- unreal engine
3.	HBGA23L12	Level Designing

**2. Portfolio- Elective**

S.NO	Sub.Code	Title of the Subject
1.	HBGA23L13	Portfolio Development Mobile Game Creation
2.	HBGA23L14	Portfolio Development PC Game Creation
3.	HBGA23L15	Portfolio Development LevelDesigning

**Note: Students should choose any one internship and portfolio**

**List of Foreign Language:**

S.No	Sub.Code	Title of the Project
1	HBFL22I01	French
2	HBFL22I02	German
3	HBFL22I03	Japanese
4	HBFL22I04	Arabic
5	HBFL22I05	Chinese
6	HBFL22I06	Russian
7	HBFL22I07	Spanish

**TABLE-I****Components of curriculum and credit distribution**

S. No	CATEGORY	Description	No. of Courses	Credits	Total	Credit Weightage	Contact hours
1	CORE COURSES	Core Theory	9	35	43	35%	540
		Core Lab	4	8			150
2	ELECTIVE COURSES	Department Electives/ Skill enhancement electives	2	17	17	9%	180
3	OPEN ELECTIVES	Open Elective theory	-	-	2	2%	-
		Open Elective Lab	1	2			30
4	INTERDISCIPLINARY/ ALLIED COURSES	Theory	4	12	12	7%	35
		Lab	-	-			-
5	HUMANITIES & SOCIAL SCIENCES , LIFE SKILLS &SOFT SKILLS	Language 1 & 2	2	6	24	18%	90
		English 1 & 2	2	6			90
		Soft Skills	2	2			30
		Life Skill	-	-			-
		Foreign Language	1	1			15
		Environmental Studies	1	3			45
		Management Papers	-	-			-
		Entrepreneurship Development	1	3			45
		Universal Human values	1	3			45
		Entrepreneurship					-
6	PROJECTS/INTERNSHI P/ CORE SKILL	Project	5	20	20	19%	300
		Core Skills	0	0			-
		Internship / NSS / NCC	0	0			75
7	Research Component	Research methodology, Publication, IPR and Patents etc.	-	-	-	-	-
8	Any other	ETP	4	12	12	9%	180
Total			40	130	130		1950

**TABLE-2**

Revision/Modification done in syllabus content:

S.No	Course code	Course Name	Concept/Topic if any removed in current curriculum	Concept/Topic added in the new curriculum	% of Revision /Modification done
1	HBAV23ET1	Visualization Techniques and Image Editing	Removed Theory Converted as Embedded theory and practical	Introduction to Image Editing  Layers & Uses  Filters  Color Correction  Logo Design	100%
2	HBAV22ID3	ALLIED-III STORY BOARDING	What are story boards?  Usage of story boards – Story board terminology  Points to remember  Using Arrows in Story boards, Shot variations, Perspective Basics – One Point, Two Point, Three Point, Forced and Aerial. Contrast & Mood, From Script to Story Boarding.	Definition of story boarding  Purpose of Storyboard  ,Advantages of Story board , Using Arrows and Abbreviations in Story boards, Camera shots, Depicting camera movement,Types of character shots, How to transition between scenes and 180 degree rule , The Anatomy of a complete character, Tricks for the Character poses, Storyboarding on perspective and depth, manipulating with size, color and detailed objects, Key parts of an effective storyboarding , Balancing image weighs, Scene implied depth , Film aspect ratios, How to breakdown the script.	100%
3	HBGA23004	3DCHARACTER MODELING	Introduced new subject	<ul style="list-style-type: none"> <li>• Introduction to concept creation</li> <li>• Introduction to character creation</li> </ul>	100%

				<ul style="list-style-type: none"> <li>• Four legs animation creation</li> <li>• Working with Extended Parameters</li> <li>• Introduction to 3d character</li> </ul>	
4	HBGA23ET1	Camera and Lenses	Introduced new subject	<ul style="list-style-type: none"> <li>• Camera Types</li> <li>• Intro to Lense</li> <li>• Types of lighting</li> <li>• Create studio light setup</li> <li>• Create a Photo album</li> </ul>	100%
5	HBGA23L04	3D Character Modeling Lab	Introduced new subject	Create a 3D game Character with war suit.	100%
6	HBGA23006	ADVANCED CHARACTER MODELING MAYA	Introduced new subject	<ul style="list-style-type: none"> <li>• Introduction to Modeling</li> <li>• Transforms</li> <li>• Boolean operations</li> <li>• Animation in Maya for games</li> <li>• Camera</li> </ul>	100%
7	HBGA23L06	ADVANCED CHARACTER MODELING MAYA LAB	<ul style="list-style-type: none"> <li>• Environment model</li> <li>• Property for games</li> <li>• Game pose</li> <li>• War shield</li> <li>• Face model</li> </ul>	<ul style="list-style-type: none"> <li>• Create Dinosaur 3d Model In Maya</li> <li>• Create Transformer 3d Model In Maya</li> <li>• Create Any Human Organs In Maya</li> <li>• Create A Ghost Character In Maya</li> </ul>	100%

8	HBGA23ET3	GAME DESIGN FOR VR APPLICATION	Introduced new subject	<ul style="list-style-type: none"> <li>• Introduction to mobile application</li> <li>• Application development</li> <li>• Creating Sprites</li> <li>• Collisions</li> <li>• project Development</li> </ul>	100%
9	HBGA23L08	UNREAL ENGINE FOR 3D LAB	Introduced new subject	<ul style="list-style-type: none"> <li>• Create a forest environment in unreal engine</li> <li>• Create a classic environment city year 1935 in maya and unreal engine</li> <li>• Create a new game set design in unreal engine</li> <li>• Create a interior house walk through in unreal engine</li> <li>• Create a class war place in unreal engine</li> </ul>	100%
10	HBAA22008	LAWS AND ETHICS FOR ANIMATION	Introduced new subject	<ul style="list-style-type: none"> <li>• Animation Laws and Ethics</li> <li>• Copyright</li> </ul>	100%

				<ul style="list-style-type: none"><li>• Licensing and Distribution</li><li>• Ethical Issues in Animation</li></ul>	
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**TABLE-3**

List of New courses / value added courses / life skills / Electives / interdisciplinary / courses focusing on employability / entrepreneurship / skill development

S.No	New Course	Value Added Course	Life Skills	Electives	Interdisciplinary / Allied	Focus on employability/ Entrepreneurship/ Skill development
Sem 1	Visualization Techniques And Image Editing as ETP				Anatomy Drawing	<ul style="list-style-type: none"> <li>Project I - Game layout designing</li> </ul>
Sem 2					Concept design for game character	<ul style="list-style-type: none"> <li>mobile layout - UI &amp; UX Design lab</li> <li>Project II- UI Designing for game</li> </ul>
Sem 3					Story boarding	<ul style="list-style-type: none"> <li>Project III - 3D Game character Model</li> <li>Camera and lenses</li> </ul>
Sem 4			Foreign Languages		Contemporary Documentaries and News Reels	<ul style="list-style-type: none"> <li>project IV - 3D Game character rigging Animation</li> </ul>
Sem 5					Substance painter	<ul style="list-style-type: none"> <li>Entrepreneurship development</li> <li>Unreal engine for 3D</li> <li>project V- Environment level designing</li> </ul>
Sem 6			Universal human values			<ul style="list-style-type: none"> <li>Internship</li> <li>Portfolio</li> </ul>

# **SEMESTER I**

<b>Subject Code:</b>	<b>Subject Name:</b> <b>TAMIL - I</b>	<b>C</b>	<b>L</b>	<b>T / S.Lr</b>	<b>P / R</b>	<b>T/L/EL</b>				
<b>HBTA22001</b>	<b>Prerequisite:</b>	3	3	0/0	0/0	Ty				
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/EL : Theory / Lab / Embedded Theory and Lab										
<b>OBJECTIVES</b>										
•	<ul style="list-style-type: none"> <li>Understand the aims and objectives of teaching Tamil.</li> <li>Understand the rational for learning Tamil.</li> <li>To motivate and stimulate the students to overcome their inferiority complex and improve fluency in the language.</li> <li>Learn significance of spoken skill.</li> <li>The relationship between language &amp; culture and the implications for language teaching.</li> </ul>									
<b>COURSE OUTCOMES (Cos) - Students completing this course were able to</b>										
<b>CO1</b>	Tamil students are actively engaged in learning Tamil language and culture in a meaningful setting									
<b>CO2</b>	Focus on applying the language in real life situations.									
<b>CO3</b>	Use proficiency descriptors to motivate learners to progress to the next stage of learning. .									
<b>CO4</b>	Lessons are customized to arouse students interest and ignite the joy of learning Tamil language.									
<b>CO5</b>	Develop a strong foundation in listening & speaking skills.									
<b>Mapping of Course Outcome with Program Outcome (POs)</b>										
<b>Cos/POs</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	
<b>CO1</b>	3	3	2	2	2	1	1	0	2	
<b>CO2</b>	3	3	2	3	3	2	3	2	3	
<b>CO3</b>	3	3	3	3	2	1	2	2	3	
<b>CO4</b>	2	3	3	3	3	1	2	3	3	
<b>CO5</b>	2	2	2	3	3	2	3	1	3	
<b>COs/PSOs</b>	<b>PSO1</b>		<b>PSO2</b>			<b>PSO3</b>			<b>PSO4</b>	
<b>CO1</b>	3		3			3			3	
<b>CO2</b>	2		2			3			3	
<b>CO3</b>	3		3			3			2	
<b>CO4</b>	2		2			3			3	
<b>CO5</b>	3		2			2			3	
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low										
<b>Category</b>	<b>Basic Sciences</b>	<b>Interdisciplinary course</b>	<b>Humanities &amp; social Science</b>	<b>Program Core</b>	<b>Program Elective</b>	<b>Open Elective</b>		<b>Practical/Project</b>	<b>Internships/Technical Skills</b>	<b>Soft Skills</b>
			√							

TAMIL - I

முதலாம் ஆண்டு -  
முதல்பருவம்

கற்றல்நோக்கம்:

1.மாணவர்களின்கவிதை,கட்டுரைஎழுதும்திறன்வளர்த்தல்

2. தமிழில்பிழையின்றிபேசும்எழுதும்திறன்வளர்த்தல்

அலகு - 1 11 மணிநேரம்

அ) மரபுக்கவிதை

1.செந்தமிழ்நாடு - மகாகவிபாரதியார்

2.தமிழின்இனிமை, இன்பத்தமிழ், எங்கள்தமிழ், சங்கநாதம் -  
பாரதிதாசன்

3.தமிழ்வளர்க்கசபதம் - நாமக்கல்கவிஞர்வெ.இராமலிங்கம்பிள்ளை

4. கோயில்வழிபாடு, வாழ்க்கைத்தத்துவங்கள் -  
கவிமணிதேசிகவிநாயகம்பிள்ளை

5.கும்மிப்பாடல் - சுத்தானந்தபாரதியார்

6. தமிழ்த்தாய்வாழ்த்து -  
மனோன்மணியம்பெ.சுந்தரம்பிள்ளை

7.விடுதலைவிளைத்தஉரிமை -  
கவியரசர்கண்ணதாசன்

8. அன்பெனும்பிடியுள்... ..,முரசறைத்தல் -  
வள்ளலார்இராமலிங்கஅடிகள்

ஆ) புதுக்கவிதை

1.பாட்டாளிகளின்குரல் -

பட்டுக்கோட்டைகலியாணசுந்தரம்

2. மகாத்மகாந்தியடிகள் - கவிஞர்வாலி

3. காகிதப்பூக்கள் - நா.காமராசு

4.வள்ளுவர்வழங்கும்விடுதலை -

ஈரோடுதமிழன்பன்

5. உலகம் -வைரமுத்து

6. இன்னமுதமாமழை - பேரா. முனைவர்பொற்கோ

7.தமிழ்ப்பற்று - மீரா

8.ஐந்தாம்வகுப்புஅபிரிவு - நா.முத்துக்குமார்

அலகு - 2 7 மணிநேரம்

நாட்டுப்புறஇலக்கியம்

1. பொதுஅறிமுகம்

2. நாட்டுப்புறஇலக்கியவகைகள்

3.நாட்டுப்புறக்கலைகள்

அலகு - 3

அ) சிறுகதைகள்

1. தேங்காய்த்துண்டுகள் (மு.வரதராசனார்)

2. அறம் (மாலன்)

3. நாற்காலியும்நான்குதலைமுறைகளும் (

திலகவதி)

4. அன்னையும்பிதாவும் (இராஜாஜி)

5. விடியுமா? (கு.ப.ராஜகோபாலன்)

ஆ) உரைநடை

1. மு.வ.என்னும்மந்திரம் (இரா.மோகன்)

2. தமிழிசைஇயக்கம் (க.வெள்ளைவாரணனார்)

3. மதுரைமாநகரம் (ரா.பி.சேதுப்பிள்ளை)

அலகு - 4 6 மணிநேரம்

1. புதுக்கவிதை - தோற்றமும்வளர்ச்சியும்

2. உரைநடை - தோற்றமும்வளர்ச்சியும்

3. சிறுகதை - தோற்றமும்வளர்ச்சியும்

அலகு - 5 9 மணிநேரம்

அ) இலக்கணம்

1. வழக்கு

2. தொகாநிலைத்தொடர்

3. எழுத்துப்போலி

4. பதவியல்

ஆ) மொழிப்பயிற்சி

1. தன்வினை -பிறவினை

2. ஒருமைபன்மைமயக்கம்

3. பிறமொழிச்சொற்களைநீக்குதல்

4. விண்ணப்பம்எழுதுதல்

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Subject Code:	Subject Name: <b>HINDI I</b>	C	L	T / S.Lr	P/R	T/L/ ETL						
<b>HBHI22001</b>	Prerequisite : Knowledge of Hindi	3	3	0/0	0/0	Ty						
L : Lecture, T : Tutorial,SLr : Supervised Learning, P: Project, R : Research, C : Credits, T/L/ETL :Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ol style="list-style-type: none"> <li>To Understand the Hindi Literature, culture and the usage of language in the various streams</li> <li>To Build up the Confidence in conversing in Hindi language.</li> <li>To acquire Knowledge of the usage of Hindi language in the various Government Offices</li> </ol>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	Understand the basic concepts and Origin of Hindi											
<b>CO2</b>	Know about the roots of Hindi Literature and its perspective and methods.											
<b>CO3</b>	Elaborate and understand philosophical methods of Hindi Literature.											
<b>CO4</b>	Evaluate the concept of Hindi from past to present and to study the society closely through Literature											
<b>CO5</b>	Understand the importance of Hindi in the contemporary world.											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
<b>Cos/POs</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>			
<b>CO1</b>	3	3	2	2	2	1	1	0	2			
<b>CO2</b>	3	3	2	3	3	2	3	2	3			
<b>CO3</b>	3	3	3	3	2	1	2	2	3			
<b>CO4</b>	2	3	3	3	3	1	2	3	3			
<b>CO5</b>	2	2	2	3	3	2	3	1	3			
<b>Cos/PSOs</b>	<b>PSO1</b>		<b>PSO2</b>			<b>PSO3</b>			<b>PSO4</b>			
<b>CO1</b>	3		3			3			3			
<b>CO2</b>	2		2			3			3			
<b>CO3</b>	3		3			3			2			
<b>CO4</b>	2		2			3			3			
<b>CO5</b>	3		2			2			3			
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Engg.Science	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/Project	Internships/Technical Skills	Soft Skills			
			√									

Subject Code:	Subject Name: <b>HINDI I</b>	C	L	T / S.Lr	P/R	T/L/ ETL
<b>HBHI22001</b>	Prerequisite : Knowledge of Hindi	3	3	0/0	0/0	Ty
L : Lecture, T : Tutorial, SLr : Supervised Learning, P: Project, R : Research, C : Credits, T/L/ETL :Theory / Lab / Embedded Theory and Lab						

### UNIT - I

Prose –Understanding the secret of the culture and how to draft the letters in Government offices, technical terms  
 Sabhyataka Rahasya  
 Personal Applications  
 Leave Letters  
 Government Order  
 Administrative Terminology Hindi to English (25 Words)

### UNIT - II

Prose-Understanding the human relations and also to know the procedures to open the account in the bank, technical terms  
 Mitrata  
 Letter to the Editor  
 Opening an A/C  
 Demi Official Letter  
 Administrative Terminology English to Hindi ( 25 Words)

### UNIT-III

Prose-the contribution of youth in developing India, drafting memo and technical things used in memo  
 YuvavonSe  
 Application for Withdrawal  
 Circular  
 Memo  
 Administrative Terminology Hindi to English ( 25 Words)

### UNIT-IV

Prose-The effect of Nuclear energy and usage of technical terms in offices  
 Paramanu Oorja evam Khadya Padarth Sanrakshan  
 Transfer of an A/C  
 Missing of Pass Book / Cheque Leaf  
 Official Memo  
 Administrative Terminology English to Hindi ( 25 Words)

### UNIT-V

Prose-The Obstacles faced by the youth for getting employment, drafting complaint letters, technical terms  
 Yougyata aur Vyavasay kaChunav  
 Complaints  
 Ordering forBooks  
 Notification  
 Official Noting Hindi to English ( 25 words)

**Total No of Hours: 45**

### REFERENCE:

Prayojan MoolakHindi:  
 Dr. Syed Rahamathulla, PoornimaPrakashan  
 4/7, Begum III Street, Royapettah, Chennai – 14  
 Hindi Gadhya Mala Dr. Syed Rahamathulla, PoornimaPrakashan  
 4/7, Begum III Street, Royapettah, Chennai

Subject Code:	Subject Name: <b>FRENCH - I</b>	C	L	T / S.Lr	P/R	T/L/ ETL
<b>HBFR22001</b>	Prerequisite : None	3	3	0/0	0/0	Ty

L : Lecture, T : Tutorial, SLr : Supervised Learning, P: Project, R : Research, C : Credits, T/L/ETL :Theory / Lab / Embedded Theory and Lab

#### OBJECTIVES

1. The students will acquire a different perspective of their own culture in relation to the French culture
2. The students will discover new attitudes towards familiar practices
3. The students will acquire a sense of the French language, its music and rhythms and basic usage.
4. The students will acquire a comprehensive view of the European Union and the member states

#### COURSE OUTCOMES (Cos)

Students completing this course were able to

CO1	Identify the French language from other European language and to show and tell French words and expression
CO2	Understand how the language works discovering the pronunciation
CO3	Start writing short dialogues of greetings, Try to interact with someone with life skill question –what where, who etc, Describe persons and places
CO4	Discover France and its physical tributes, develop an idea about the importance of France in the world affairs, Analyze ideas in the content of short paragraphs, paintings etc., and everyday contexts. Appreciate the culture and uniqueness of France. Discuss in English various aspects of France and a new cultural events and compare with current scenario, Answer with confidence in small sentences on everyday life.
CO5	Develop enough confidence to introduce oneself and ask others simple questions about personal details. Interact as long as other person speaks slowly and clearly.
CO6	Plan a rendezvous, a casual meeting by interacting with basic sentences and expressions as long as the person to with whom he/she speaks can help to reformulate the sentences
CO7	Write a simple message can fill a simple questionnaire .write ones names, nationality ,address etc. on a hotel registration card /passport etc.

#### Mapping of Course Outcome with Program Outcome (POs)

Cos/ POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9			
CO1	3	2	2	2	2	1	2	2	3			
CO2	2	2	2	2	1	1	3	2	3			
CO3	2	3	2	3	1	1	2	2	3			
CO4	3	3	3	2	2	2	2	3	3			
CO5	2	2	2	3	3	2	3	2	3			
CO6	3	3	2	2	3	3	3	3	3			
CO7	3	3	2	2	3	3	3	3	3			

COs/PSOs	PSO1	PSO2	PSO3	PSO4
CO1	3	3	3	3
CO2	2	2	3	3
CO3	3	3	3	2
CO4	2	2	3	3
CO5	3	2	2	3

3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low

Category	Basic Sciences	Engg .Science	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical / Project	Internships/Technical Skills	Soft Skills
			√						

Subject Code:	Subject Name: <b>FRENCH - I</b>	C	L	T / S.Lr	P/R	T/L/ ETL
<b>HBFR22001</b>	Prerequisite : None	3	3	0/0	0/0	Ty
L : Lecture, T : Tutorial,SLr : Supervised Learning, P: Project, R : Research, C : Credits, T/L/ETL :Theory / Lab / Embedded Theory and Lab						

### UNIT I 9Hrs

#### Se saluer, La Graphie- écrire (compréhension orale, expression orale)

- Se Présenter, La langue française, La Graphie – écrire L’alphabet, L’abécédaire, Les Accents et les Ponctuations, L’interaction de base.
  - **Clip audios** : Exercices orales, compositions orales et épreuves orales. (20 –durée moins de 2 minutes)
  - **Audio clips-** For oral expressions, oral assignments and oral test-20 duration less than 2 minutes (10 oral exercises, 6 audio reading compositions& 4 tests).

### UNIT II

**9 Hrs**

#### S’informer-Interactions aidant des Compétences De base

- Des modèles interrogatifs, Les nombres, demander le cout /le prix, Demander l’heure, Les jours, Les mois de l’année.
  - **Clip audios** : Exercices orales, compositions orales et épreuves orales. (20 –durée moins de 2 minutes)
  - **Audio clips-** For oral expressions, oral assignments and oral test-20 duration less than 2 minutes (10 oral exercises, 6 audio reading compositions& 4 tests).

### UNIT III

**9 Hrs**

#### Localiser –La France

- Quelque symbole de la France.La carte de l’Europe, La France dans le contexte international, La France et les Fuseaux horaires, La francophonie, L’union Européen, La France physique, industrielle, touristique rt administrative, Quelque symbole de Paris.
  - **Clip audios** : Exercices orales, compositions orales et épreuves orales. (20 –durée moins de 2 minutes)
  - **Audio clips-** For oral expressions, oral assignments and oral test-20 duration less than 2 minutes (10 oral exercises, 6 audio reading compositions& 4 tests).

### UNIT IV

**9 Hrs**

#### Lire et prononcer Le française

- Les son française, les voyelles françaises, les sons nasaux, les consonné, Quelque sons uniques. Les syllabus français, Les Rythme de la langue française.
  - **Clip audios** : Exercices orales, compositions orales et épreuves orales.(20 –durée moins de 2 minutes)
  - **Audio clips-** For oral expressions, oral assignments and oral test-20 duration less than 2 minutes (10 oral exercises ,6 audio reading

## UNIT V

9 Hrs

### Observer et Comprendre

- La vie de la France quotidienne, En cas d'urgence. La grammaire initiale
  - **Clip audios** : Exercices orales, compositions orales et épreuves orales. (20 –durée moins de 2 minutes)
  - **Audio clips** - For oral expressions, oral assignments and oral test -20 duration less than 2 minutes (10 oral exercises, 6 audio Reading compositions & 4 tests).

**Total No of Hours: 45**

### *Reference Books :*

1. **Parlez-vous français?Partie 1** - Dr.M.Chandrika.V.Unni & Mrs. Meena Mathews 2019 by Universal publisher
2. **CLE INTERNATIONAL** Lectures Clé en français facile. (2012) Hachette Paris
3. **Cosmopolite**: Livre d'élève A1 by Nathalie Hirsch sprung, Tony Tricot, Claude Le Ninan
4. **Latitudes-1** - Régine Mérieux & Yves l'oiseau, Didier 2017
5. **Alter Ego 1** - Catherine Dolez, Sylvie Pons : (2014) Hachette, Paris

Subject Code: <b>HBEN22001</b>	<b>ENGLISH I (Common to all UG Courses under H&amp;S)</b>								L	T / S.Lr	P/R	C	
	Total contact hours – 45								3	0/0	0/0	3	
	Prerequisite – English Language												
	Course designed by – Department of English												
<b>Course Objectives</b>													
<ol style="list-style-type: none"> <li>1. Develop English Language skills (LSRW) to communicate in English without any inhibition.</li> <li>2. Learn vocabulary and syntax to be fluent in English for social and academic communication</li> <li>3. Demonstrate content knowledge through appropriate language use for academic success.</li> <li>4. Develop in them analytical and interpretative skills for research, projects, placement etc.,</li> <li>5. Engage in academic and business writing with a focus on social and professional ethics.</li> </ol>													
<b>Course Outcomes (COs)</b>													
<ol style="list-style-type: none"> <li>1. Possess Language skills (LSRW) to communicate in English without any inhibition.</li> <li>2. Express with appropriate lexis and syntax in English for social and academic communication</li> <li>3. Demonstrate content knowledge through appropriate language use for academic success.</li> <li>4. Analyse and interpret any genre of literature in English for research, projects, placement etc.,</li> <li>5. Engage themselves in organized academic and business writing with professional ethics.</li> </ol>													
<b>Program Specific Outcomes (PSOs)</b>													
<ol style="list-style-type: none"> <li>1. Demonstrating mastery of the components of English language and literature.</li> <li>2. Explaining through literature in English, diverse historical cultural and social ethics</li> <li>3. Applying literary critical perspectives to generate original analysis of literature in English</li> <li>4. Promoting cultural values and real-life skills through English language and Literature</li> </ol>													
<b>Mapping of course outcomes (COs) with Program Outcomes (POs)&amp; Program Specific Outcomes</b>													
(3/2/1 indicates the strength of correlation) 3= High; 2= Medium; 1= Low													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO 1	PSO 2	PSO 3	PSO 4
1	3	3	3	3	3	3	3	1	3	3	3	3	3
2	3	3	3	3	3	3	3	1	3	3	3	3	3
3	3	3	3	3	3	3	3	1	3	3	3	3	3
4	3	3	3	3	3	3	3	1	3	3	3	3	3
5	3	3	3	3	3	3	3	1	3	3	3	3	3
3. Category		H&S	Program core	Program Elective	Open Elective	Interdisciplinary/ Allied	Skill enhancing Elective	Skill component	Practical	Project	Internship	Others	
		√											

Subject Code: HBEN22001	ENGLISH I (Common to all UG Courses under H&S)	L	T / S.Lr	P/R	C
	Total contact hours – 45	3	0/0	0/0	3
	Prerequisite – English Language				
	Course designed by – Department of English				

### Unit I: Prose

1. Beware the Loss of Bio-Diversity
2. The Unsung Hero of COVID-19 in India
3. Grading Down Plastics
4. My Vision for India

### Unit II: Poetry

1. On Killing a Tree
2. The Road Not Taken
3. Anthem for Doomed Youth

### Unit III: Short Story

1. Portrait of a Lady
2. Uncle Podger Hangs a Picture
3. A Retrieved Information

### Unit IV: Drama

1. The Never-Never Nest
2. Frederick Douglas

### Unit V: Functional Grammar – Charts & LSRW Development

#### Functional Grammar: (*Grammar exercises spread up in all four units*)

Parts of speech- use of articles- prepositions – their uses – verb + prepositions- words followed by prepositions – modals -tenses- active -passive- impersonal passive forms- concord- conditional sentences – question tags - Common errors - Punctuation

Vocabulary development- word formation - prefixes-suffixes – synonyms-antonyms – homophones -homonyms – words often confused

#### Charts/Diagrams and their interpretation - their use

Tables- Tree diagram - Pie chart- Flow chart- Bar chart

**Letters:** Formal and Informal

#### LSRW Development

LSRW development through audio, video and tasks for the content of lessons under each unit.

### Course Outcomes:

On completing the course the students will

1. Possess Language skills (LSRW) to communicate in English without any inhibition.
2. Have learnt vocabulary and syntax to be fluent in English for social and academic communication
3. Demonstrate content knowledge through appropriate language use for academic success.
4. Analyze and interpret any genre of literature in English for research, projects, placement etc.,
5. Engage themselves in organized academic and business writing with a focus on social and professional ethics.

**Total No of Hours: 45**

### Prescribed Text:

1. Dr. M. Chandrasena Rajeswaran & Dr. R. Pushkala .Pinnacle: A Skills Integrated English Text Book for Under Graduate Students.

### Suggested Reading

2. Wren and Martin: Grammar and Composition, Chand & Co, 2006

Subject Code	Subject Name : <b>ALLIED – I - ANATOMY DRAWING</b>	C	L	T/SLr	P/R	T/L/ETP						
<b>HBAV22ID1</b>	Prerequisite : None	3	2	0/1	0/0	Ty						
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits						T/L/ETL						
: Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>➤ To enhance the students to understand the concepts of drawing in all forms and perspectives.</li> <li>➤ Makes them familiarize about the facial expressions</li> <li>➤ To understand basics of 2D and 3D Shapes</li> <li>➤ Makes them to understand about camera angle</li> <li>➤ Making them to understand about colors</li> </ul>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	Understand the fundamental elements of basic anatomical relationships relevant to the descriptive drawing of the human form.											
<b>CO2</b>	Apply the structural and tonal drawing skills to convey the complexity of the human form.											
<b>CO3</b>	Analyze the Muscular skeletal structure of the human body.											
<b>CO4</b>	Evaluate the drawing processes, creative outcomes and their own development.											
<b>CO5</b>	Create art forms using techniques and methods appropriate to the intended results.											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9			
CO1	3	3	2	2	2	1	1	0	2			
CO2	3	3	2	3	3	2	3	2	3			
CO3	3	3	3	3	2	1	2	2	3			
CO4	2	3	3	3	3	1	2	3	3			
CO5	2	2	2	3	3	2	3	1	3			
COs/PSOs	PSO1			PSO2			PSO3					
CO1	3			3			3					
CO2	3			3			3					
CO3	3			3			3					
CO4	2			3			3					
CO5	2			2			3					
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Interdisciplinary course	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/Project	Internships/Technical Skills	Soft Skills			
		√										

Subject Code	Subject Name :	C	L	T/SLr	P/R	T/L/ ETP
<b>HBAV22ID1</b>	<b>ALLIED – I -ANATOMY DRAWING</b>					
	Prerequisite : None	3	2	0/1	0/0	Ty
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab						

### UNIT I

**9 Hrs**

Elements of Drawing - Basic Line Arts - Drawing Basic Shapes - Forms & Shapes.

### UNIT II

**9 Hrs**

Forms and Symmetry - Basic Forms in Animation - Construction of Different Forms

### UNIT III

**9 Hrs**

Converting 2D shape into 3D Forms – Shading Invisible Lines - Camera Angles – Color Wheel - Light & Source of Light - Pencil Shading –

### UNIT IV

**9 Hrs**

Basic Forms with Shading - Sketching Perspective of Object - One Point, Two Point, Three Point, Forced, Aerial

### UNIT V

**9 Hrs**

Line of Action - Understanding Composition of the Figure - Putting Basic forms on the Line of Action - Proportions of Model – Still Life - Creating a Layout - Staging Characters on Layout.

**Total No. of Hrs: 45**

### TEXT BOOK:

- 1.Thomson &Arthur(2011) *Anatomy of the Artist* , [Oxford, Clarendon Press](#).

### REFERENCES:

- 1 . Aditya Chari, *Figure drawing made easy*
2. Valerie L. Winslow(2008),*Classic Human Anatomy: The Artist's Guide to Form, Function, and Movement Hardcover*
3. Wynn Kapit & Lawrence M. Elson(2013) , *The Anatomy Coloring Book*.

Subject Code	Subject Name : <b>ANIMATION AND GAME DESIGNING</b>				C	L	T/SLr	P/R	Ty/ Lb/ ETL
<b>HBGA23001</b>	Prerequisite : None				4	3	1/0	0/0	Ty
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab									
<b>OBJECTIVES</b>									
<ul style="list-style-type: none"> <li>➤ To make the student to understand on basics of Designing</li> <li>➤ Makes them understand the designing elements</li> <li>➤ To make students to understand about history of Animation</li> <li>➤ To ensure students to know about Animation Field</li> <li>➤ To make students to know about Latest trends in Designing &amp; Animation Field</li> </ul>									
<b>COURSE OUTCOMES (Cos)</b>									
Students completing this course were able to									
<b>CO1</b>	Understand the basic concepts of Nature & Scope of Designing								
<b>CO2</b>	Learn about Designing Elements Principles & its Types.								
<b>CO3</b>	Ensure in familiarizing the History & Characteristics of Animation								
<b>CO4</b>	Ideate, Learn & Strategize designing for Animation								
<b>CO5</b>	Analyse and interpret the latest trends in Designing & Animation Field								
<b>Mapping of Course Outcome with Program Outcome (POs)</b>									
<b>Cos/POs</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>
<b>CO1</b>	3	2	3	3	2	2	3	1	3
<b>CO2</b>	2	3	3	3	3	3	2	1	3
<b>CO3</b>	3	1	3	3	3	2	1	3	2
<b>CO4</b>	2	2	2	3	3	3	3	3	3
<b>CO5</b>	3	2	3	2	1	3	2	3	2
<b>COs/PSOs</b>	<b>PSO1</b>			<b>PSO2</b>			<b>PSO3</b>		
<b>CO1</b>	3			2			3		
<b>CO2</b>	2			3			2		
<b>CO3</b>	3			3			3		
<b>CO4</b>	3			1			3		
<b>CO5</b>	2			2			3		
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low									
Category	Basic Sciences	Engg. Science	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/Project	Internships/Technical Skills	Soft Skills
				√					

Subject Code	Subject Name :	C	L	T/SLr	P/R	Ty/ Lb/ ETL
<b>HBGA23001</b>	<b>ANIMATION AND GAME DESIGNING</b> Prerequisite : None	4	3	1/0	0/0	Ty
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab						

### UNIT I

12 Hrs

Concept, definition and elements of human communication - Intrapersonal communication - Interpersonal communication - Group Communication - Public Communication - Verbal & Nonverbal communication - Visual Communication - Signs, Symbols & Code systems

### UNIT II

12 Hrs

History of Animation - Animation: Meaning, definition & types - Basic Principles of Animation - Anatomy & Body Language - Introduction to Animation Technologies

### UNIT III

12 Hrs

Introduction to UX Design , Concepts UI & UX Design , Design Thinking & stages, Divergent and Convergent Thinking ,Brainstorming versus Game storming & Observational Empathy

### UNIT IV

12Hrs

Principles of Design - Elements of Design - Color Wheel - Primary and Secondary Colors - Black & White - Warm and Cool Colors - Understanding Lights – Lighting and Shading – Visual and Imagery Techniques - Direct & Indirect Approach - Thinking in various point of view

### UNIT V

12 Hrs

Principles of productdesign - Types of Products & Solutions -Design Psychology -Strategy of UX Business -Design Thinking Life Cycle - Design thinking , 7 Keys of Design Thinking - Importance of User Research & Iteration - Ideation - Storyboarding & evaluating a prototype

**Total No. of Hrs: 60**

### TEXT BOOK:

- Paul Martin Lester (2006) *Visual Communication: Image with messages(5<sup>th</sup> ed.)*, Thomson Wadsworth
- [John Adair](#)(2004)*The Concise Adair on Creativity and Innovation* , Thorogood Publishers

### REFERENCES:

- McQuailDennis(1981) *Communication Models*, Longman, London.
- Chris Patmore,*The Complete Animation Course* – Barons Educational Series (New York)

<b>Subject Code :</b>	<b>Subject Name :</b> <b>ENVIRONMENTAL STUDIES</b>		<b>C</b>	<b>L</b>	<b>T/SLr</b>	<b>P/R</b>	<b>Ty/ Lb/ ETL</b>					
<b>HBCC22001</b>	Prerequisite : None		3	3	0/0	0/0	Ty					
L : Lecture T : Tutorial P : Project C: Credits												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>To acquire knowledge of the Environment and Ecosystem &amp; Biodiversity</li> <li>To acquire knowledge of the different types of Environmental pollution</li> <li>To know more about Natural Resources and social issues and the Environment</li> </ul> To attain familiarity of human population and Environment												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	To known about Environment and Ecosystem & Biodiversity											
<b>CO2</b>	To clearly comprehend air, water, Soil, Marine, Noise, Thermal and Nuclear Pollutions and Solid Waste management and identify the importance of natural resources.											
<b>CO3</b>	To know about the natural resourcesand environmental problems associated with climate change, global warming, acid rain, ozone layer depletion etc., and explain possible solution.											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9			
CO1	2	1	1	1	2	1		2	2			
CO2	2	1	1	1	2	1		2	2			
CO3	2	1	1	1	2	1		2	2			
<b>Category</b>	<b>Basic Sciences</b>	<b>Interdisciplinary course</b>	<b>Humanities &amp; social Science</b>	<b>Program Core</b>	<b>Program Elective</b>	<b>Open Elective</b>	<b>Practical/Project</b>	<b>Internships/ Technical Skills</b>	<b>Soft Skills</b>			
			√									

<b>Subject Code :</b>	<b>Subject Name :</b> <b>ENVIRONMENTAL STUDIES</b>	<b>C</b>	<b>L</b>	<b>T/SLr</b>	<b>P/R</b>	<b>Ty/ Lb/ ETL</b>
<b>HBCC22001</b>	Prerequisite : None	3	3	0/0	0/0	Ty
L : Lecture T : Tutorial P : Project C: Credits						

### **UNIT I ENVIRONMENT AND ECOSYSTEMS**

**9 Hrs**

Definition, scope and importance of environment – need for public awareness – concept, structure and function of an ecosystem – producers, consumers and decomposers – energy flow in the ecosystem. Biodiversity at National and local levels – India

### **UNIT II ENVIRONMENTAL POLLUTION**

**9 Hrs**

Definition – causes, effects and control measures of: (a) Air pollution (b) Water pollution (c) Soil pollution (d) Marine pollution (e) Noise pollution (f) Nuclear hazards (g) E-Wastes and causes, effects and control measures

### **UNIT III NATURAL RESOURCES**

**9 Hrs**

Forest resources: Use and over-exploitation, deforestation. Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems. Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems.

### **UNIT IV SOCIAL ISSUES AND THE ENVIRONMENT**

**9 Hrs**

From unsustainable to sustainable development – urban problems related to energy – water conservation, rain water harvesting, watershed management – resettlement and rehabilitation of people; its problems and concerns climate change, global warming, acid rain, ozone layer depletion, nuclear accidents ,central and state pollution control boards- Public awareness.

### **UNIT V HUMAN POPULATION AND THE ENVIRONMENT**

**9 Hrs**

Population growth, variation among nations – population explosion, environment and human health – human rights – value education – HIV / AIDS – women and child welfare – role of information technology in environment and human health

**Total no of Hours : 45**

### **TEXT BOOKS:**

1. Gilbert M.Masters, 'Introduction to Environmental Engineering and Science', 2nd edition, Pearson Education (2004).
2. Benny Joseph, 'Environmental Science and Engineering', Tata McGrawHill,NewDelhi, (2006).

Subject Code	Subject Name : <b>Visualization Techniques and Image Editing</b>		C	L	T/SLr	P/R	Ty/Lb/ETP					
<b>HBAV23ET1</b>	Prerequisite : None		3	2	0/0	2/0	ETP					
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits							T/L/ETL :					
Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>➤ Ensures that the student can create any kind of layouts, for print media.</li> <li>➤ Guides the student to visualize the product for a perfect delivery</li> <li>➤ Makes sure that the students will be able to create templates according to the need</li> <li>➤ Students will be able confidently design or edit the layouts and concepts</li> <li>➤ To make the students gain knowledge on industry experiences</li> </ul>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	Students will be able to remember the basic concepts of document setups											
<b>CO2</b>	Students will be able to understand about the layer working and techniques											
<b>CO3</b>	Students will start to apply the filter concept to image editing											
<b>CO4</b>	Students will be able to analyze the difference in colour tones and usages in image editing											
<b>CO5</b>	Students will create different products and designs in the software											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	2	1	1	2	3	3	3			
CO2	3	3	3	3	3	3	3	3	3			
CO3	3	3	2	3	2	2	3	2	3			
CO4	3	2	3	3	2	2	3	2	3			
CO5	3	3	3	3	3	3	3	3	3			
COs/PSOs	PSO1			PSO2			PSO3			PSO4		
CO1	3			2			3					
CO2	3			3			3					
CO3	2			3			3					
CO4	2			2			2					
CO5	3			3			3					
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Interdisciplinary course	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/Project	Internships/ Technical Skills	Soft Skills			
				√								

Subject Code	Subject Name : <b>Visualization Techniques and Image Editing</b>	C	L	T/SLr	P/R	Ty/Lb/ETP
<b>HBAV23ET1</b>	Prerequisite : None	3	2	0/0	2/0	ETP
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab						

### UNIT I

**9 Hrs**

Introduction to Image Editing - Image Size and Resolution- Types of Images - Creating a New Document - Color Modes- Importing & Placing Images - Saving a Document - Tool Bar -drawing - selecting - Copying & Pasting - retouching-painting-shaping - Copy & Copy Merge - Paste & Paste Special- Saving Documents and Formats

### UNIT II

**9 Hrs**

Layers & Uses - Adjustment Layer - Working with Layer Comps - Organizing Layers - Linking Layers - Layer styles - Blending Modes - Painting Tools - Type Tools - Shape Tools - Work Path - Clipping Path –Introduction to Video Layer.

### UNIT III

**9 Hrs**

Filters - Image menu options - Filter Gallery - Liquefy - Oil Paint - Blur Options - Distort Filter - Noise - Sharpen & Stylize - Render Filter - Sharpen, smudge Tool - –Introduction to AI in Photoshop. Saving Files

### UNIT IV

**9 Hrs**

1.Color Correction ,2. Masking, 3. Double Exposure, 4. Digital Painting Glowing Object Effect .5. Photo Effect, 6.Photo Re-touch

### UNIT V

**9 Hrs**

1. Logo Design , 2. Poster Design, 3. Image Mockup, 4. Magazine Cover, 5.

**Total No. of Hrs: 45**

### TEXT BOOK:

1. [Adobe Creative Team](#)(Author) (2010)*Adobe Photoshop CS6 Classroom in a Book,Adobe Press*

### REFERENCES:

2. Mike Wooldridge & Brianna Stuart,(2012)*Teach yourself Visually Adobe Photoshop, Wiley*
3. The Photoshop Workbook: Professional Retouching and Compositing Tips, Tricks - [Glyn Dewis](#)

Subject Code	Subject Name : <b>PROJECT – I GAME LAYOUT DESIGNING</b>	C	L	T/SLr	P/R	Ty/Lb/ ETL			
<b>HBGA23L01</b>	Prerequisite : None	4	0	0/0	8/0	Lb			
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab									
<b>OBJECTIVES</b>									
<ul style="list-style-type: none"> <li>➤ Ensures practical experience in crafting game templates complete with links, buttons, and icons.</li> <li>➤ Improves students ability to deliver work with confidence in a professional setting</li> <li>➤ Improves confidence in their capacity to design game layouts effectively.</li> <li>➤ Equips students with the skills to operate within defined timeframes</li> <li>➤ Enabling students to meet deadlines proficiently in a professional environment</li> </ul>									
<b>COURSE OUTCOMES (Cos)</b>									
Students completing this course were able to									
<b>CO1</b>	Students gain practical expertise in creating game templates featuring comprehensive elements like links, buttons, and icons.								
<b>CO2</b>	The course enhances students' capability to confidently deliver work within a professional context.								
<b>CO3</b>	Students' self-assurance in effectively designing game layouts is significantly improved.								
<b>CO4</b>	Equipped with skills to adhere to specified timeframes, students are adept at meeting deadlines in professional settings.								
<b>CO5</b>	The course empowers students to proficiently meet project deadlines within the dynamics of professional environments.								
<b>Mapping of Course Outcome with Program Outcome (POs)</b>									
<b>Cos/ POs</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>
<b>CO1</b>	3	3	3	3	3	3	3	1	3
<b>CO2</b>	3	3	3	3	3	3	1	2	3
<b>CO3</b>	3	3	3	3	3	2	2	1	3
<b>CO4</b>	3	3	3	3	3	3	3	3	3
<b>CO5</b>	3	3	3	3	2	3	3	3	3
<b>COs/PSOs</b>	<b>PSO1</b>			<b>PSO2</b>			<b>PSO3</b>		
<b>CO1</b>	3			3			3		
<b>CO2</b>	3			3			3		
<b>CO3</b>	3			3			3		
<b>CO4</b>	3			3			2		
<b>CO5</b>	3			3			3		
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low									
<b>Category</b>	<b>Basic Sciences</b>	<b>Interdisciplinary course</b>	<b>Humanities &amp; social Science</b>	<b>Program Core</b>	<b>Program Elective</b>	<b>Open Elective</b>	<b>Practical/ Project</b>	<b>Internships/ Technical Skills</b>	<b>Soft Skills</b>
							√		

Subject Code	Subject Name : <b>PROJECT – I GAME LAYOUT DESIGNING</b>	C	L	T/SLr	P/R	Ty/Lb/ ETL
<b>HBGA23L01</b>	Prerequisite : None	4	0	0/0	8/0	Lb
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab						

1. Create a game layout design template for a new 2D game which should have a front page, sub pages, back page.
2. Name the Game and using 3D Effects.
3. Create a logo for the game .
4. Add proper backgrounds for each page use CMYK colors so that it can sent for print .
5. Create new game company name , Add the address in the back page and the LOGO in the front page .

Subject Code	Subject Name : <b>SOFT SKILL - I</b>	C	L	T/SLr	P/R	Ty/Lb/ETL			
<b>HBCC22I02</b>	Prerequisite : None	1	0	0/0	2/0	IE			
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab									
<b>OBJECTIVES</b>									
<ul style="list-style-type: none"> <li>➤ Become good listeners to get engaged in interactive communication for effective team building.</li> <li>➤ Develop assertive and adaptive behavior to be leaders</li> <li>➤ Develop peer interaction for a successful lifelong learning.</li> <li>➤ Learn skills necessary for a cooperative living in academic and professional environments</li> <li>➤ Use soft skills for the purposes of research and follow ethics in society and profession.</li> </ul>									
<b>COURSE OUTCOMES (Cos)</b>									
Students completing this course were able to									
<b>CO1</b>	Become good listeners to get engaged in interactive communication for effective team building.								
<b>CO2</b>	Develop assertive and adaptive behaviour to be leaders								
<b>CO3</b>	Develop peer interaction for a successful lifelong learning.								
<b>CO4</b>	Learn skills necessary for a cooperative living in academic and professional environments								
<b>CO5</b>	Use soft skills for the purposes of research and follow ethics in society and profession								
<b>Mapping of Course Outcome with Program Outcome (POs)</b>									
Cos/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO1	3	3	3	1	2	2	1	2	3
CO2	3	3	3	1	2	2	1	2	3
CO3	3	3	3	1	2	2	1	2	3
CO4	3	3	3	3	3	2	1	2	3
CO5	3	3	3	3	3	2	1	2	3
COs/PSOs	PSO1		PSO2			PSO3		PSO4	
Co1	3		2			2		2	
Co2	2		2			2		2	
Co3	3		2			2		2	
Co4	3		2			2		2	
Co5	3		2			2		2	
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low									
Category	Basic Sciences	Interdisciplinary course	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/Project	Internships/ Technical Skills	Soft Skills
									√

Subject Code	Subject Name : <b>SOFT SKILL - I</b>	C	L	T/SLr	P/R	Ty/Lb/ETL
<b>HBCC22I02</b>	Prerequisite : None	1	0	0/0	2/0	IE
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab						

### **Prefatory Note**

This paper aims to equip students with skills essential for work place and global environment to which they will move on from the university, once they complete the course. As such, this paper provides students with a set of ten interlinked soft skills: Listening, team work, emotional intelligence, assertiveness, learning to learn, problem solving, attending interviews, adaptability, non-verbal communication and written communication. Students will get engaged in pair work, group work, role play, discussion, presentation, story telling, writing assignments etc.,

#### Unit -I

Listening, Speaking, Reading and Writing skills (LSRW)

#### Unit -II

Team work skills: adaptability, emotional intelligence, learning skills

#### Unit -III

Leadership Qualities: assertiveness, reasoning, compassion and compatibility

#### Unit -IV

Problem solving: willingness to learn, creative thinking, developing observation skills

#### Unit -V

Interview skills: employability skills, resume writing

**Total No of Hours: 30**

#### Suggested reading

S.P. Dhanavel, English and Soft Skills, Vol. 1, Orient Blackswan Pvt. Ltd. 2010

# **SEMESTER-II**

<b>Subject Code:</b> HBTA22002	<b>Subject Name:</b> TAMIL PAPER - II		<b>C</b>	<b>L</b>	<b>T / S.Lr</b>	<b>P / R</b>	<b>T /L/ ETL</b>			
	<b>Prerequisite:</b>		3	3	0/0	0/0	Ty			
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits							T/L/EL :			
Theory / Lab / Embedded Theory and Lab										
<b>OBJECTIVES</b>										
<ul style="list-style-type: none"> <li>Communicating with friends from around the world via social networking opportunities.</li> <li>To develop 21<sup>st</sup> century learners who love &amp; appreciate Tamil language.</li> <li>Learn significance of spoken skill.</li> <li>The relationship between language &amp; culture and the implications for language teaching</li> <li>Travelling to other countries and learning about other cultures.</li> </ul>										
<b>COURSE OUTCOMES (Cos)</b>										
Students completing this course were able to										
<b>CO1</b>	Strengthen literacy skills									
<b>CO2</b>	Engage in learning Tamil language and culture in a meaningful setting									
<b>CO3</b>	Engross in independent and life-long learning									
<b>CO4</b>	Develop a strong foundation in listening & speaking skills.									
<b>CO5</b>	Arouse students interest and ignite the joy of learning Tamil language.									
<b>Mapping of Course Outcome with Program Outcome (POs)</b>										
<b>Cos/POs</b>	<b>P O1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	
<b>CO1</b>	3	3	2	3	2	3	3	3	2	
<b>CO2</b>	2	2	3	2	3	2	2	3	3	
<b>CO3</b>	3	3	2	3	2	3	3	3	2	
<b>CO4</b>	2	2	3	2	2	2	2	3	2	
<b>CO5</b>	3	3	3	3	3	3	2	2	3	
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low										
<b>Mapping of Course Outcome with Program Specific Outcome (PSOs)</b>										
	<b>PSO 01</b>		<b>PSO 02</b>		<b>PSO 03</b>		<b>PSO 04</b>			
<b>CO 1</b>	3		3		3		3			
<b>CO 2</b>	2		2		3		3			
<b>CO 3</b>	3		3		3		3			
<b>CO 4</b>	2		2		3		3			
<b>CO 5</b>	3		3		3		2			
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low										
<b>Category</b>	<b>Basic Sciences</b>	<b>Interdisciplinary course</b>	<b>Humanities &amp; social Science</b>	<b>Program Core</b>	<b>Program Elective</b>	<b>Open Elective</b>	<b>Practical/Project</b>	<b>Internships /Technical Skills</b>	<b>Soft Skills</b>	
			√							

இளநிலைமாணாக்கருக்கு  
B.A/B.Sc/B.Com/B.B.A/B.C.A/B.PES  
HBTA21002

முதலாம் ஆண்டு -இரண்டாம்பருவம்

- கற்றல்நோக்கம்: 1.தமிழர்பண்பாட்டினை அறியச்செய்தல்  
2. கடிதம்எழுதும்திறன்வளர்த்தல்  
3.தமிழ்இலக்கியவரலாற்றினை அறிதல்

**அலகு - 1 சங்கஇலக்கியம்**

9 மணிநேரம்

1. புறநானூறு -பா.எண் - 183,184,192
2. குறுந்தொகை - பா. எண் 2,40,167
3. நெடுநல்வாடை - 1 முதல் 44 வரிகள்வரை
- 4.கலித்தொகை -பா.எண் 102,133

**அலகு - 2 காப்பியம்**

1. சிலப்பதிகாரம் - வழக்குஉரைகாதைமுழுவதும்

**அலகு - 3 நீதிஇலக்கியம்**

- 1.திருக்குறள் - 34,72,96,102,103,116,124,136,158,395 (10 குறள்கள்)
- 2.நாலடியார் - 1,11,29,32,43,51,74,103,116,135 ( 10 பாடல்கள்)
- 3.ஆசாரக்கோவை - 20,23,25,76,96 ( 5 பாடல்கள்)
- 4.திரிகடுகம் - 7,12,27,31,38,(5 பாடல்கள்)

**அலகு - 4 தமிழ்இலக்கியவரலாறு**

1. பக்திஇலக்கியம்
2. சிற்றிலக்கியம்

**அலகு - 5 இலக்கணம்**

- 1.வல்லினம்மிகும்இடங்கள்
2. வல்லினம்மிகாஇடங்கள்
3. வினாவகைகள்
4. விடைவகைகள்

**மொழிப்பயிற்சி**

1. கடிதம்எழுதும்முறை
- 2.செய்வினை -செயப்பாட்டுவினை
- 3.மயங்கொலிப்பிழையெதிர்க்குக

Total No of Hours: 45

Subject Code	Subject Name : <b>LANGUAGE HINDI-II</b>		C	L	T/SLr	P/R	Ty/ Lb/ ETL				
<b>HBHI22002</b>	Prerequisite : Knowledge in Hindi		3	3	0/0	0/0	Ty				
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits							T/L/ETL :				
Theory / Lab / Embedded Theory and Lab											
<b>OBJECTIVES</b>											
<ul style="list-style-type: none"> <li>➤ 1.To Understand the Ancient Hindi plays and its aspects.</li> <li>➤ 2.To understand the medieval stories and well known novels</li> <li>➤ 3.To know the techniques in writing Annotation and Translation</li> </ul>											
<b>COURSE OUTCOMES (Cos)</b>											
Students completing this course were able to											
<b>CO1</b>	Introduce students to the real world situation with the help of Plays and stories written by various poets and writers.										
<b>CO2</b>	Understand the Literature in broader areas than merely confined to the subject										
<b>CO3</b>	Evaluate the concept of Hindi from past to present and to study the society closely through Literature.										
<b>CO4</b>	Make the best use of Hindi language in various streams.										
<b>CO5</b>	Helps in their Career acquiring knowledge in a language										
<b>Mapping of Course Outcome with Program Outcome (POs)</b>											
<b>Cos/POs</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>		
CO1	3	2	3	2	3	3	3	3	3		
CO2	3	3	3	3	2	3	3	3	2		
CO3	3	3	2	3	3	3	3	3	2		
CO4	2	3	3	3	3	2	2	3	3		
CO5	3	3	3	3	3	2	2	3	3		
<b>COs/PSOs</b>		<b>PSO1</b>			<b>PSO2</b>			<b>PSO3</b>		<b>PSO4</b>	
CO1		3			3			3			
CO2		3			3			3			
CO3		3			3			3			
CO4		3			3			3			
CO5		3			3			3			
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low											
<b>Category</b>	<b>Basic Sciences</b>	<b>Interdisciplinary course</b>	<b>Humanities &amp; social Science</b>	<b>Program Core</b>	<b>Program Elective</b>	<b>Open Elective</b>	<b>Practical/Project</b>	<b>Internships/ Technical Skills</b>	<b>Soft Skills</b>		
			√								

Subject Code	Subject Name : <b>LANGUAGE HINDI-II</b>	C	L	T/SLr	P/R	Ty/ Lb/ ETL
<b>HBHI22002</b>	Prerequisite : Knowledge in Hindi	3	3	0/0	0/0	Ty
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits Theory / Lab / Embedded Theory and Lab						T/L/ETL :

**UNIT – I One Act Play – novel and translation of hindi language)**

1. Auranzebki Aakhiri Raat
2. Mukthidhan
3. Practice of Annotation Writing
4. Practice of Summary and Literary evaluation Writing

**UNIT – II One Act Play – novel and translation of hindi language)**

1. Laksmika Swagat
2. Mithayeewala
3. Practice of Annotation Writing
4. Practice of Summary and Literary evaluation Writing

**UNIT-III One Act Play – novel and translation of hindi language)**

1. Basant Rituka Natak
2. Seb AurDev
3. Practice of Annotation Writing
4. Practice of Summary and Literary evaluation Writing

**UNIT-IV One Act Play – novel and translation of hindi language)**

1. Bahut BadaSawal
2. Vivahki Teen Kathayen
3. Practice of Annotation Writing
4. Practice of Summary and Literary evaluation Writing

**UNIT-V(Translation of Hindi Lanaguage to English language-paragraph, technical terms)**

1. Translation Practice. (English to Hindi)

**Total No of Hours: 45**

**REFERENCE**

1. Aath Ekanki, Edited by Devendra Raj Ankur, Mahesh Anand Vaaniprakashan, 4695, 21- A Dariyagunj, New Delhi-110002
2. Swarna Manjari, Edited by Dr.Chitti Annapurna, Rajeshwari Publications21/3, Mothilal street, (opp.Ranganthan Street) T.Nagar, Chennai-600017.
3. Prayojan Mulak Hindi :Dr.Syed Rahmathullah, Poornima Prakashan,4/7, Begum III street, Royapettah, Chennai-14.
4. Anuvad Abhyas Part III Dakshin Hindi Prachar Sabha, T.Nagar ,Chennai -17.

Subject Code:	Subject Name: <b>FRENCH - II</b>	C	L	T / S.Lr	P/R	T/L/ ETL						
<b>HBFR22002</b>	Prerequisite : None	3	3	0/0	0/0	Ty						
L : Lecture, T : Tutorial,SLr : Supervised Learning, P: Project, R : Research, C : Credits, T/L/ETL :Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ol style="list-style-type: none"> <li>1. The students will acquire a different perspective of their own culture in relation to the French culture</li> <li>2. The students will discover new attitudes towards familiar practices</li> <li>3. The students will acquire a sense of the French language, its music and rhythms and basic usage.</li> <li>4. The students will acquire a comprehensive view of the European Union and the member states</li> </ol>												
<b>COURSE OUTCOMES (Cos)</b> Students completing this course were able to												
<b>CO1</b>	Identify the French language from other European language and to show and tell French words and expression											
<b>CO2</b>	Understand how the language works discovering the pronunciation											
<b>CO3</b>	Start writing short dialogues of greetings, Try to interact with someone with life skill question –what where, who etc, Describe persons and places											
<b>CO4</b>	Discover France and its physical tributes, develop an idea about the importance of France in the world affairs, Analyze ideas in the content of short paragraphs, paintings etc., and everyday contexts. Appreciate the culture and uniqueness of France. Discuss in English various aspects of France and a new cultural events and compare with current scenario, Answer with confidence in small sentences on everyday life.											
<b>CO5</b>	Develop enough confidence to introduce oneself and ask others simple questions about personal details. Interact as long as other person speaks slowly and clearly.											
<b>CO6</b>	Plan a rendezvous ,a casual meeting by Interacting with basic sentences and expressions as long as the person to with whom he/she speaks can help to reformulate the sentences											
<b>CO7</b>	Write a simple message can fill a simple questionnaire .write ones names, nationality ,address etc. on a hotel registration card /passport etc.											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
<b>Cos/POs</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>			
<b>CO1</b>	3	2	2	2	2	1	2	2	3			
<b>CO2</b>	2	2	2	2	1	1	3	2	3			
<b>CO3</b>	2	3	2	3	1	1	2	2	3			
<b>CO4</b>	3	3	3	2	2	2	2	3	3			
<b>CO5</b>	2	2	2	3	3	2	3	2	3			
<b>CO6</b>	3	3	2	2	3	3	3	3	3			
<b>CO7</b>	3	3	2	2	3	3	3	3	3			
<b>COs/PSOs</b>	<b>PSO1</b>		<b>PSO2</b>			<b>PSO3</b>			<b>PSO4</b>			
<b>CO1</b>	3		3			3			3			
<b>CO2</b>	2		2			3			3			
<b>CO3</b>	3		3			3			2			
<b>CO4</b>	2		2			3			3			
<b>CO5</b>	3		2			2			3			
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
<b>Category</b>	<b>Basic Sciences</b>	<b>Interdisciplinary course</b>	<b>Humanities &amp; social Science</b>	<b>Program Core</b>	<b>Program Elective</b>	<b>Open Elective</b>	<b>Practical/ Project</b>	<b>Internships/ Technical Skills</b>	<b>Soft Skills</b>			
			√									

Subject Code:	Subject Name: <b>FRENCH - II</b>	C	L	T / S.Lr	P/R	T/L/ ETL
<b>HBFR22002</b>	Prerequisite : None	3	3	0/0	0/0	Ty
L : Lecture, T : Tutorial,SLr : Supervised Learning, P: Project, R : Research, C : Credits, T/L/ETL :Theory / Lab / Embedded Theory and Lab						

## UNIT I

9hrs

### Compétences communicatives, phonologiques, linguistiques, grammaticales et culturelles

Se saluer, prendre congé, se présenter quelqu'un/quelque chose, Salutations, présentatifs, détails d'identité, professions, quartiers Genres, nombres, articles, présentatifs, pluriels des noms, c'est/il est, pronoms toniques Salutations française, comportement des salutations, les quartiers parisiens, le peintre Monet **Clip audios** : Exercices orales, compositions orales et épreuves orales. (20 –durée moins de 2 minutes)**Audio clips-** For oral expressions, oral assignments and oral test-20- duration less than 2 minutes (10 oral exercises, 6 audio reading compositions& 4 tests).

## UNIT II

9hrs

### Compétences communicatives, phonologiques, linguistiques, grammaticales et culturelles

Dialogue de la vie d'étudiant, des liens familiaux, de l'appartenance, des habitudes ; poème, le son « eu » énonces a répéter, lecture guidée.S'exprimer de la fréquence, des habitudes, articles, present de l'indicatif, verbes a la terminaison – er, adjectifs possessifs et qualificatifs, locutions avec « avoir » Demander l'heure, Les jours, Les mois de l'année. **Clip audios** : Exercices orales, compositions orales et épreuves orales.(20 –durée moins de 2 minutes)**Audio clips-** For oral exercises, oral assignments and oral test-20 duration less than 2 minutes (10 oral exercise ,6 audio reading compositions& 4 tests).

## UNIT III

9hrs

### Compétences communicatives, phonologiques, linguistiques, grammaticales et culturelles

Parler des voyages, identifier les vêtements, caractériser de personnes, faire des exclamations, s'informer sur la vie d'étudiant français. Poème, le « son i », décrire des personnes, prononcer le nom des pays et des nationalités, appréciation/exclamation Transport et voyages, les pays, nationalités, la mode, la partie du corps ,Adjectifs de nationalités et genres, adjectifs réguliers/irréguliers, prépositions de lieux, verbes aller- venir et verbes a la terminaison –irL'aéroport de Roissy, a la douane, les vêtements, a mode a paris, quelques professions, le sport et la sante ; a Joconde, la BD, **Clip audios** : Exercices orales, compositions orales et épreuves orales. (20 –durée moins de 2 minutes)**Audio clips-** For oral expressions, oral assignments and oral test-20-duration less than 2 minutes (10 oral exercises, 6 audio Reading compositions& 4 tests)

## UNIT IV

9hrs

### Compétences communicatives, phonologiques, linguistiques, grammaticales et culturelles

Communication au restaurant, des recettes, le gout et les préférences identifier le type des restaurants. Poème, le son « o » énonces simples, des sons nasaux, exercices de répétition Les repas français recette activités et sportives **Clip audios** : Exercices orales, compositions orales et épreuves orales.(20 –durée moins de 2 minutes)**Audio clips-** For oral expressions, oral assignments and oral test-20 duration less than 2 minutes (10 oral exercises ,6 audio reading

## UNIT V

9hrs

### Compétences communicatives, phonologiques, linguistiques, grammaticales et culturelles

Planifier des vacances, parler des concours, du sport, du temps qu'il fait, s'exprimer au comparatif

Poème le son « yu », répétition d'énonces, lire de noms de quelques villes

Activités de vacances, mots de localisation, plan de Paris, le climat et l'écologie, un concours international, les saisons

Adjectifs de couleur, nombres ordinaux, quelques verbes irréguliers,

3 temps autour du présent « de » et « a » et des verbes. Différentes formes du négatif, « il fait » le comparatif le

superlatif absolu Auberges de jeunesse, vacance, plan de Paris arrondissements quelques monuments parisiens,

tourisme fluvial français **Clip audios** : Exercices orales, compositions orales et épreuves orales. (20 –durée moins de 2

minutes)**Audio clips**- For oral expressions, oral assignments and oral test-20 duration less than 2 minutes (10 oral

exercises, 6 audio Reading compositions& 4 tests).

**Total No of Hours: 45**

### Reference Books :

**Parlez-vous français? Partie 1** - Dr.M.Chandrika.V.Unni &Mrs. Meena Mathews 2019 by Universal publisher

**CLE INTERNATIONAL** Lectures Clé en français facile. (2012) Hachette Paris

**Cosmopolite**: Livre de eleve A1 by Nathalie Hirsch sprung, Tony

Tricot, Claude Le Ninan

**Latitudes-1** by Régine Mérieux & Yves l'oiseau, Didier 2017

**Alter Ego 1** - Catherine Dolez, Sylvie Pons : (2014) Hachette, Paris.

<b>HBEN22002</b>	LANGUAGE II - ENGLISH II (Common to all UG Courses under H&S)	C	L	T/S.Lr	P/R	Ty/Lb/ ETP
	Total contact hours – 45	3	3	0/0	0/0	Ty
	Prerequisite – English Language					
	T/L/:Theory/LabL:LectureT:TutorialP:Practical/ProjectR:ResearchC:Credits					

### Course Objectives

1. Develop four language skills appropriate to the level of education.
2. Demonstrate knowledge of vocabulary and sentence construction in appropriate contexts.
3. Express diverse forms of knowledge in different social and cultural contexts.
4. Attain a comprehensive knowledge of communication skills to use ethically.
5. Develop organized academic and business writing for professional careers.

### Course Outcomes (COs)

1. Develop four language skills appropriate to the level of education.
2. Demonstrate knowledge of vocabulary and sentence construction in appropriate contexts.
3. Express diverse forms of knowledge in different social and cultural contexts.
4. Attain a comprehensive knowledge of communication skills to use ethically.
5. Develop organized academic and business writing for professional careers.

### Program Specific Outcomes (PSOs)

- Demonstrating mastery of the components of English language and literature.
- Explaining through literature in English, diverse historical cultural and social ethics
- Applying literary critical perspectives to generate original analysis of literature in English
- Promoting cultural values and real-life skills through English language and Literature

### Mapping of course outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes

(3/2/1 indicates the strength of correlation) 3= High; 2= Medium; 1= Low

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3	PSO4
1	3	3	3	3	3	3	3	1	3	3	3	3	3
2	3	3	3	3	3	3	3	1	3	3	3	3	3
3	3	3	3	3	3	3	3	1	3	3	3	3	3
4	3	3	3	3	3	3	3	1	3	3	3	3	3
5	3	3	3	3	3	3	3	1	3	3	3	3	3
3. Category	H&S	Program core	Program Elective	Open Elective	Interdisciplinary/ Allied	Skill enhancing Elective	Skill component	Practical	Project	Internship	Others		
	√												

Course Code	LANGUAGE-II : ENGLISH II	Ty/Lb/ ETP	L	T/ S.Lr	P/R	C
HBEN22002	(Common to all UG H&S Courses)	Ty	3	0/0	0/0	3
T/L/:Theory/LabL:LectureT:TutorialP:Practical/ProjectR:ResearchC:Credits						

### Course Objective

1. Develop four language skills appropriate to the level of education.
2. Demonstrate knowledge of vocabulary and sentence construction in appropriate contexts.
3. Express diverse forms of knowledge in different social and cultural contexts.
4. Attain a comprehensive knowledge of communication skills to use ethically.
5. Develop organized academic and business writing for professional careers.

#### Unit I:

**9 Hours**

1. All the World's a Stage – William Shakespeare
2. Speech of Barack Obama
3. The Verger- Somerset Maugham

#### Unit II:

**9 Hours**

1. Spider and the Fly - Mary Howitt
2. "They thought that a bullet would silence us, but they failed". - Malala Yousafzai
3. Refund – Fritz Karinthy

#### Unit III:

**9 Hours**

1. Night of the Scorpion-Nissim Ezekiel
2. On Running after one's hat- G.K.Chesterton
3. The Last Leaf – O. Henry

#### Unit IV:

**9 Hours**

1. Polonius Advice to Laertes-William Shakespeare
2. 'We Must Continue to Dream Big': An open letter from Serena Williams
3. The Necklace - Guy de Maupassant

**Unit V:****9 Hours**

1. Functional English: Letter Writing (Formal, Informal, Email)
2. Resume
3. Précis
4. Reading Comprehension  
Developing the hints

**Course Outcome: On completion of the course, the students will be able to**

1. Develop four language skills appropriate to the level of education.
2. Demonstrate knowledge of vocabulary and sentence construction in appropriate contexts.
3. Express diverse forms of knowledge in different social and cultural contexts.
4. Attain a comprehensive knowledge of communication skills to use ethically.
5. Develop organized academic and business writing for professional careers.

**Prescribed Text:**

- ‘Greatest Speeches of the Modern World’, Rupa Publications India, 2018.
- Woudhuysen H.R. ‘The Arden Shakespeare third series’, the Arden Shakespeare Publishers, 2020.
- Karinthy. Fritz, ‘Refund: A Play in One Act’, French. Samuel, 1938.
- Simpson H. C & Wilson E. H, ‘A Senior Anthology of Poetry’, Macmillan Education, 1952.
- O’Brien. Terry, ‘50 Greatest Short Stories’, Rupa Publications India; First Edition, 2015.
- J. C. Richards with J. Hull & S.Proctor, Interchange, Level 3, Cambridge University Press, 2021.
- Mark Hancock, English Pronunciation in Use, CUP, 2016.
- M. Chandrasena Rajeswaran &R. Pushkala, Communication Lab Work book 2022.
- M. Chandrasena Rajeswaran, R. Pushkala & S. Bhuvaneshwari Pinnacle: A Skills Integrated Text,2022
- Dutt, K, Rajeevan, G & Prakash, , *A Course on Communication Skills*, 1st edn,CUP, Chennai,2008

**Suggested Links:**

- <https://www.poetrybyheart.org.uk/poems/the-spider-and-the-fly/Reference>.
- <https://poets.org/poem/unknown-citizen>

Subject Code:	Subject Name : <b>ALLIED II-CONCEPT DESIGN FOR GAME CHARACTER</b>	C	L	T/SLr	P/R	Ty/Lb/ ETL						
HBGA23ID1	Prerequisite : None	3	2	1/0	0/0	Ty						
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>To encourage the student to acquire knowledge about game concepts</li> <li>Student knows about creating art works for the game</li> <li>Makes the student understand about lights</li> <li>Helps him to create new ideas for the game</li> <li>Helps the student to learn about sketching the characters</li> </ul>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	To help and gain the knowledge on creating ideas for designs											
<b>CO2</b>	To make the students gain knowledge on basic requirement of designs											
<b>CO3</b>	To make the students learn about matte painting											
<b>CO4</b>	Students learns about the concept of light and color theory											
<b>CO5</b>	Students gains knowledge on designing environment for Game concept											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	3	2	3	2	1	3	2	3			
CO2	3	3	3	3	1	3	3	1	3			
CO3	3	2	1	3	3	1	2	3	3			
CO4	3	3	3	3	1	2	1	3	3			
CO5	1	2	2	3	3	2	2	2	3			
COs/PSOs	PSO1			PSO2			PSO3			PSO4		
CO1	3			2			3					
CO2	3			3			2					
CO3	3			1			2					
CO4	3			2			2					
CO5	3			2			2					
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Interdisciplinary course	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/Project	Internships/ Technical Skills	Soft Skills			
		√										

Subject Code	Subject Name :	C	L	T/SLr	P/R	Ty/ Lb/ ETL
HBGA23ID1	<b>ALLIED II-CONCEPT DESIGN FOR GAME CHARACTER</b> Prerequisite : None	3	2	1/0	0/0	Ty
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits Theory / Lab / Embedded Theory and Lab						T/L/ETL :

### UNIT I

9hrs

Introduction to Concept designs for game - game art - Indian art- Visualizing new ideas - create story board for the newly generated ideas - Story generation - ideas for new games

### UNIT II

9 hrs

Environment concept design - -develop and visualize the idea -sketching and drawing -photography - game concept - use Matte painting generate the story

### UNIT III

9hrs

Design shapes -silhouette -design shape for show language - character shapes -sketching - creating a story concept design -working with matte painting -showing sequence of matte painting in Image editing software -working with Image editing matte painting.

### UNIT IV

9hrs

Basic level design -concept of lighting & its value -visual development for game concept -concept of color theory - story telling -3d visualizing for character -environment design

### UNIT V

9hrs

Creating new ideas for game world - - objects - characters - vehicles -furniture -clothing -level design -color scheme - mood and feel of the game using art -perspective - Brining the concept to shape

**Total No. of Hrs: 45**

TEXT BOOK: 1. The Art of Game Design: A Book of Lenses - jesse Schell

2. [Fundamentals of Game Design](#) by - Ernest Adam

REFERENCE: Cartooning: The Ultimate Character Design Book- by [Christopher Hart](#)

Subject Code	Subject Name : <b>MOBILE LAYOUT -UI &amp; UX DESIGN</b>				C	L	T/SLr	P/R	Ty/ Lb/ ETL			
<b>HBGA23002</b>	Prerequisite : None				4	3	1/0	0/0	Ty			
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits								T/L/ETL :				
Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>• Student learns to how to create UI&amp; UX DESIGN</li> <li>• Helps the student to work on user interface design</li> <li>• Helps them to learn about Android mobile UX designs</li> <li>• Make them familiarize with the Typography</li> <li>• Enables the student to create assets</li> </ul>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	To make Student know about Properties and user Interface											
<b>CO2</b>	Adapting designs for various iOS devices by learning the basics of wireframe											
<b>CO3</b>	Learning the basics of the software Photoshop software as a tool.											
<b>CO4</b>	To gain knowledge on creating UI and UX											
<b>CO5</b>	To learn and create a UI for mobile application.											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	1	2	3	1	1	3	1	3			
CO2	1	1	3	3	1	3	3	1	3			
CO3	3	1	2	3	1	2	2	3	3			
CO4	3	2	3	3	1	2	1	1	2			
CO5	1	1	2	3	3	2	2	2	3			
COs/PSOs	PSO1			PSO2				PSO3			PSO4	
CO1	3			2				3				
CO2	3			3				2				
CO3	3			1				2				
CO4	3			2				2				
CO5	3			2				2				
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Engg.Science	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/ Project	Internships/ Technical Skills	Soft Skills			
				√								

Subject Code	Subject Name :	C	L	T/SLr	P/R	Ty/ Lb/ ETL
<b>HBGA23002</b>	<b>MOBILE LAYOUT -UI &amp; UX DESIGN</b>	4	3	1/0	0/0	Ty
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits						T/L/ETL :
Theory / Lab / Embedded Theory and Lab						

**UNIT I:**

**12hrs**

Understanding the interface - Understanding various design methods - Properties- Shortcuts - Design task - Color theory and Typography - Understanding the usage of colors on UI -

**UNIT II:**

**12hrs**

Resources for colors - Finding inspirations for iOS screens -Setting a visual design strategy -Converting the wireframes into visual design- Interactions and micro interactions- Assets and style guides - overview of Sharing for development

**UNIT III :**

**12hrs**

Interface Shapes - Pen Tool - Text Tool -Art boards - Layers -Components -Plug-in- Panel ,Repeat Grid - Guides Grids -Masks - Shortcuts- Prototyping - Tools Interaction -Panel Triggers & Actions - Mobile and Desktop Previews -Recording Prototype -Sharing - Working With Files

**UNIT IV:**

**12hrs**

Introduction to Android mobiles UX designs -Reviews -Introduction to material design- Understanding various sections of a screen in android and Apple mobiles - -Reviewing the entire progress

**UNIT V :**

**12hrs**

Static designs& dynamics designs - Responsive and adaptive designs - responsive website - review of all the designs

**Total No. of Hrs: 60**

**TEXT BOOK:**

1. Essential Mobile Interaction Design: Perfecting Interface Design in Mobile Apps (Usability) by Cameron Banga (Author), Josh Weinhold (Author)
2. Adobe XD Classroom in a Book (2020 release)by Brian Wood Released May 2020

**REFERENCE:**

- 1.Mobile User Experience -by **Adrian Mendoza**
2. Laws of UX: Using Psychology to Design Better Products & Services

# **PRACTICAL**

Subject Code	Subject Name : <b>MOBILE LAYOUT -UI &amp; UX DESIGN LAB</b>		C	L	T/SLr	P/R	Ty/Lb/ ETL					
<b>HBGA23L02</b>	Prerequisite : None		2	0	0/0	2/2	Lb					
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits							T/L/ETL :					
Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>Ensures that student creates icons for the mobile games</li> <li>Make the student create icons for the PC games</li> <li>Make him to plan and execute a user interface design</li> <li>Ensures that the student is confident in sketching 2D layouts</li> <li>Gives him hands on experience in creating user interface designs for the games</li> </ul>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	To create logos and buttons											
<b>CO2</b>	To create icons for PC games											
<b>CO3</b>	.To create PC Interface for car game.											
<b>CO4</b>	To model a new game for a PC											
<b>CO5</b>	To learn 2D layout sketching for game											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	1	3	1	2	2	3	2	3			
CO2	1	2	3	1	1	3	3	2	3			
CO3	2	1	3	1	1	2	2	3	2			
CO4	2	1	3	1	1	2	3	3	2			
CO5	1	2	2	3	3	2	2	2	3			
COs/PSOs	PSO1			PSO2			PSO3			PSO4		
CO1	3			2			3					
CO2	3			3			2					
CO3	3			1			2					
CO4	3			2			2					
CO5	3			2			2					
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Engg.Science	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/Project	Internships/ Technical Skills	Soft Skills			
							√					

Subject Code	Subject Name :	C	L	T/SLr	P/R	Ty/Lb/ETL
	<b>MOBILE LAYOUT -UI &amp; UX DESIGN LAB</b>					
<b>HBGA23L02</b>	Prerequisite : None	2	0	0/0	2/2	Lb
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits						T/L/ETL :
Theory / Lab / Embedded Theory and Lab						

- 1) Create five icons - play button- company logo - stop button and arrow keys
- 2) Create two new mobile interface design for Temple run game
- 3) Create two new PC interface design for Car games
- 4) Create a User Interface design for a new game and name it
- 5) Sketch a 2D Layout for a new game

**TOTAL - 30Hrs**

Subject Code	Subject Name : <b>PROJECT II - UI DESIGNING For GAME</b>						C	L	T/SLr	P/R	Ty/ Lb/ ETL	
<b>HBGA23L03</b>	Prerequisite : None						4	0	0/0	8/0	Lb	
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits											T/L/ETL :	
Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>Ensures that the Student is able to create user interface design with various types of design</li> <li>Makes him to create a concept using matte painting</li> <li>Make the student to do creative background designs</li> <li>Makes him job oriented by giving industry oriented designs</li> <li>Helps the student to do create interactive pages for game interface</li> </ul>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	Understanding of deign principles											
<b>CO2</b>	Students use Adobe XD,,sketch , Figma and other relevant software											
<b>CO3</b>	Learns how to create wireframes and prototypes to visualize and test UI concepts											
<b>CO4</b>	Develop skills in organizing and structuring information effectively within a user interface.											
<b>CO5</b>	Creates a portfolio showcasing a range of UI design projects											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	1	2	2	3	2	3	2	3			
CO2	3	3	3	3	1	3	3	1	3			
CO3	3	2	1	3	3	2	2	3	2			
CO4	1	1	3	3	1	2	1	3	2			
CO5	1	2	2	3	3	2	2	2	3			
COs/PSOs	PSO1			PSO2				PSO3			PSO4	
CO1	3			2				3				
CO2	3			3				2				
CO3	3			1				2				
CO4	3			2				2				
CO5	3			2				2				
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Engg.Science	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/Project				Internships/ Technical Skills	Soft Skills
							√					

Subject Code	Subject Name :	C	L	T/SLr	P/R	Ty/ Lb/ ETL
<b>HBGA23L03</b>	<b>PROJECT II - UI DESIGNING For GAME</b> Prerequisite : None	4	0	0/0	8/0	Lb

Create a game concept and produce it as a story, Should have a minimum 5 pages, front page should have the links for all the 4 pages. Each page should have designer icons.

The Interface should have a designer background created with the characters/objects involved in the game.

<b>B.Sc.</b>	<b>SOFT SKILL II (B.Sc/BBA/BCOM/BSW Programs)</b>				L	T	P	C	
	Total contact hours – 15				0	0/0	2/0	1	
<b>HBCC22I03</b>	Prerequisite –UG I year English								
	Course designed by – Department of English								
<b>Objectives:</b>									
Cultivate employability skills that they get employed even before they leave the university. Build self-esteem and a sense of self-worth to be good team members Cultivate empathy to think from others’ point of view to be good team leaders. Evolve as good global citizens with insights into social and professional ethics. Develop lifelong learning skills to adapt in the multicultural context of workplaces.									
<b>Course Outcomes (Cos)</b>									
001	Cultivate employability skills that they get employed even before they leave the university								
002	Build self-esteem and a sense of self-worth to be good team members								
003	Cultivate empathy to think from others’ point of view to be good team leaders.								
004	Evolve as good global citizens with insights into social and professional ethics								
005	Develop lifelong learning skills to adapt in the multicultural context of workplaces.								
<b>Program Specific Objectives</b>									
PSO1	Understanding of the basic concepts of English language and literature.								
PSO2	Learning through literature in English, diverse historical cultural and social ethics								
PSO3	Application of literary critical perspectives to generate original analysis of literature in English								
PSO4	Promotion of cultural values and real-life skills through English language and literature								
<b>Mapping of course outcomes (COs) with Program Outcomes (POs)</b> (H/M/L indicates the strength of correlation) H= High; M= Medium; L= Low									
COs	POs	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
1	3	3	3	1	2	2	1	2	3
2	3	3	3	1	2	2	1	2	3
3	3	3	3	1	2	2	1	2	3
4	3	3	3	3	3	2	1	2	3
5	3	3	3	3	3	2	1	2	3
<b>Mapping of course outcomes (Cos) with program Specific outcomes (PSOs)</b>									
COs	PSO1	PSO2	PSO3	PSO4					
CO1	3	2	2	2					
CO2	2	2	2	2					
CO3	3	2	2	2					
CO4	3	2	2	2					
CO5	3	2	2	2					
<b>H/M//L Indicates Strength of Correlation : H- High; M- Medium; L- Low</b>									
Category	Basic Sciences	Engg. Science	Program core	Program Elective	Professional Core	Professional Elective	Open Elective	Practical Project/ Seminar/ Internship	Soft Skills (H)
									√

<b>B.Sc.</b>  <b>HBCC22I03</b>	<b>SOFT SKILL II (B.Sc/BBA/BCOM/BSW Programs)</b>	L	T	P	C
	Total contact hours – 15	0	0/0	2/0	1
	Prerequisite –UG I year English				
	Course designed by – Department of English				

### **Prefatory Note**

This paper aims to equip the advanced learners with skills essential for work place and global environment to which they will move on from the university, once they complete the course. As such, it covers a range of indispensable soft skills and values such as, self-esteem, empathy, public relations, positivity, reliability, professionalism, leadership and intercultural communication, interview skills, etc.. Together with the effective English communication in global contexts, these skills, if cultivated and strengthened, can immensely help the students become employable in the multinational companies as good global citizens abiding the social and professional ethics in cross-cultural diversity.

### **Course Objective**

The students will be facilitated to

1. Cultivate employability skills that they get employed even before they leave the university.
2. Build self-esteem and a sense of self-worth to be good team members
3. Cultivate empathy to think from others' point of view to be good team leaders.
4. Evolve as good global citizens with insights into social and professional ethics.
5. Develop lifelong learning skills to adapt in the multicultural context of workplaces.

### **Unit -I**

Conversational skills, Self-esteem skills, empathy, public relations

### **Unit -II**

Positivity, reliability, professionalism

### **Unit -III**

Leadership

Problem solving

### **Unit -IV**

Intercultural communication skills

Global Manthra: Go local, Cultural sensitivity, Group behavior

Cultural intelligence: Low and High context, e mail and inter cultural communication

### **Unit -V**

Group discussion & Interview skills

**Total No of Hours: 30**

### **Suggested reading**

1. S.P. Dhanavel, English and Soft Skills, Vol.2 Orient Blackswan Pvt. Ltd. 2010
2. P.D. Chaturvedi and M. Chaturvedi, Communication Skills , Pearson, 2012

# **SEMESTER III**

Subject Code	Subject Name : <b>ALLIED-III STORY BOARDING</b>					C	L	T/SLr	P/R	Ty/Lb/ ETL		
<b>HBAV22ID3</b>	Prerequisite : None					3	3	0/0	0/0	Ty		
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits								T/L/ETL :				
Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>➤ Introduction to Story board.</li> <li>➤ Students learn to create thumb mail sketches with different perspective.</li> <li>➤ Make him to familiarize the character creation and development.</li> <li>➤ To make the students learn about shapes in motion, and directing shots.</li> <li>➤ To make the student to pre visualize the whole script and create a sequence and help the student to create a product delivery on time.</li> </ul>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	demonstrate how to construct storyboards as a brief form of storytelling											
<b>CO2</b>	demonstrate how to create the mechanics of storyboarding											
<b>CO3</b>	demonstrate knowledge of camera angles and terminology conducive to storyboard and film making..											
<b>CO4</b>	demonstrate knowledge of storyboard narrative.											
<b>CO5</b>	demonstrate a knowledge of production writing as it relates to 3D animation											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	2	2	3	2	3	2	3			
CO2	3	2	3	3	1	3	3	1	2			
CO3	1	2	1	2	3	2	2	3	2			
CO4	3	3	1	3	3	2	1	2	2			
CO5	1	2	2	3	3		2	3	3			
COs/PSOs	PSO1			PSO2			PSO3			PSO4		
CO1	3			2			3					
CO2	3			3			2					
CO3	3			1			2					
CO4	3			2			2					
CO5	3			2			2					
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Interdisciplinary	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/Project	Internships/ Technical Skills	Soft Skills			
		√										

Subject Code	Subject Name : <b>ALLIED-III STORY BOARDING</b>	C	L	T/SLr	P/R	Ty/Lb/ETL
<b>HBAV22ID3</b>	Prerequisite : None	3	3	0/0	0/0	Ty
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits						T/L/ETL :
Theory / Lab / Embedded Theory and Lab						

### UNIT I

**9 Hrs**

Definition of story boarding –Purpose of Storyboard –Who directs and lays out the storyboard – Advantages of Story board – Using Arrows and Abbreviations in Story boards.

### UNIT II

**9 Hrs**

Benefits to Production- Animation- Visual Effects Industry- Quick Thumbnail Story Boards – Thumb nail sketches – Different types of camera shots- Depicting camera movement. Types of character shots.- How to transition between scenes and 180 degree rule

### UNIT III

**9 Hrs**

Character Creation and Development – Psychology of Characters- The Anatomy of a complete character- Tricks for the Character poses .Human Sketches and Figures – Proportions of a Body- Human Figures in Action.

### UNIT IV

**9 Hrs**

Storyboarding on perspective and depth- manipulating with size- color and detailed objects. Shapes in Motion – Line of Action- Drawing a Car- Animal Characters- Mountain- Road- and Landscape with Mountains- Cityscape- and Villa etc....

### UNIT V

**9 Hrs**

Key parts of an effective storyboarding - Balancing image weighs- Scene implied depth - tone - mood and style. Visual Sequence Direction – Story Board Numbering- Film aspect ratios - Storyboarding a Single Panel and How to breakdown the script.

**Total No. of Hrs: 45**

### TEXT BOOK:

1. John Hart (2007) *The Art of the Story Board(2nd ed.)*, Focal Press.

### REFERENCES:

1. Fred Patten (2012), *The Story Board Artist : Guide to Freelancing in Film, TV and Advertising*.
2. John Hart (2007), *The Art of the Storyboard: A Filmmaker's Introduction (2nd ed.)*, Focal Press.

Subject Code	Subject Name : <b>INTRODUCTION TO UNITY 3D - LEVEL-1</b>					C	L	T/SLr	P/R	Ty/Lb/ ETL		
<b>HBGA23003</b>	Prerequisite : None					4	3	1/0	0/0	Ty		
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits								T/L/ETL :				
Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>• Make the student learn the interface of UNITY 3D</li> <li>• Ensures that he will able to create objects for games</li> <li>• Helps the student to get familiarize in Lighting Effects</li> <li>• Make the student to create realistic nature's effects</li> <li>• Make him confident in giving movements for the game character</li> </ul>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	Students learn about the basics of working with basic Unity 3D software											
<b>CO2</b>	Students are trained about the game object concepts											
<b>CO3</b>	To make the students gain knowledge on lighting and environment											
<b>CO4</b>	Students are trained to create visual effects using particles											
<b>CO5</b>	Students creates the game controller to the created characters											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	2	3	2	3	3	3	2	2			
CO2	3	2	3	2	1	3	2	1	3			
CO3	2	3	3	3	3	1	2	3	2			
CO4	1	3	2	3	1	2	2	3	3			
CO5	3	3	2	3	3	3	2	3	3			
COs/PSOs	PSO1			PSO2			PSO3			PSO4		
CO1	3			2			3					
CO2	3			3			2					
CO3	3			1			2					
CO4	3			2			2					
CO5	3			2			2					
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Engg.Science	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/Project	Internships/ Technical Skills	Soft Skills			
				√								

Subject Code	Subject Name : <b>INTRODUCTION TO UNITY 3D - LEVEL-1</b>	C	L	T/SLr	P/R	Ty/Lb/ ETL
<b>HBGA23003</b>	Prerequisite : None	4	3	1/0	0/0	Ty
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab						

### UNIT I

**12 Hrs**

Introduction to Unity Editor - Prototyping in Unity -Level Design -Creating a Player Controller -  
Creating User Interface and Audio -Post Processing and Cinemachine -Building your project .

### UNIT II

**12 Hrs**

Unity Interface - Scene Navigation - Game Object Concepts- Reviewing the Game Design Document-  
Prototyping with Primitives -Prototyping the Mouse Manager

### UNIT III

**12 Hrs**

Introduction to ProBuilder - Configuring Environment Assets- Creating Environment Prefabs -Lighting &Environment

### UNIT IV

**12 Hrs**

Creating Particle Systems - smoke - image particles - fog - Creating Light Streaks- lights - spot light - Emission lights

### UNIT V

**12 Hrs**

Setting up the Character - Configuring the Animator Controller -Creating the Player Controller - Adding Accessories  
to Characters

**Total No. of Hrs: 60**

**TEXT BOOK:** *Game Development with Unity* - by **Michelle Menard**

*Unity 3D Game Development by Example Beginner's Guide: Lite Edition* - by **Ryan Henson Creighton**

### REFERENCES:

1.<https://forum.unity.com/threads/looking-to-buy-unity-book-for-studying.512492/>

2. **UNITY FROM ZERO TO PROFICIENCY - Patrick Felicia**

Subject Code	Subject Name : <b>3D CHARACTER MODELING</b>				C	L	T/SLr	P/R	Ty/Lb/ ETL			
<b>HBGA23004</b>	Prerequisite : None				4	3	0/1	0/0	Ty			
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits								T/L/ETL :				
Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<p>Make the student create 3D characters as per the specifications</p> <p>To give confidence to the student by making him to create industry oriented models</p> <p>Make him create photorealistic models with proper lightings</p> <p>To create new textures</p> <p>Ensures that the student to create models in the given time frame.</p>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	To make the students learn the basics of character designing											
<b>CO2</b>	Students are taught about the basics of primitives and camera movements											
<b>CO3</b>	Students gains knowledge on texturing process											
<b>CO4</b>	Students gains knowledge on V-ray material process											
<b>CO5</b>	To make students learn about texturing process using maps											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/ POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	2	3	2	3	2	3	3	3			
CO2	2	3	3	2	1	3	3	3	3			
CO3	1	2	3	3	3	2	2	2	2			
CO4	2	3	2	3	1	2	2	3	2			
CO5	1	3	2	3	3	2	3	3	3			
COs/PSOs	PSO1			PSO2			PSO3			PSO4		
CO1	3			2			3					
CO2	3			3			2					
CO3	3			1			2					
CO4	3			2			2					
CO5	3			2			2					
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Interdisciplinary	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/Project	Internships/ Technical Skills	Soft Skills			
				√								

Subject Code	Subject Name :	C	L	T/SLr	P/R	Ty/Lb/ETL
<b>HBGA23004</b>	<b>3D CHARACTER MODELING</b> Prerequisite : None	4	3	0/1	0/0	Ty
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab						

### UNIT I

12 Hrs

Introduction to concept creation of character creation- working with creation character model-analyzed different game creation-working with famous game character.

### UNIT II

12 Hrs

Introduction to character creation, Types of shape – working with difference primitives – concepts creation – curves – Creating sketching for character, Controlling properties, Camera Parameters for character , Multiple Pass for character Effects, Depth Of Field, motion blur, Camera Correction Modifier

### UNIT III

12 Hrs

Introduction to four legs animation creation – applying details to the model - Interface of editopoly, Sample Slots, Material Editor Buttons, Reflections and Refractions , Shiness and Secular High Lights , Standard Materials – intro to v-ray rendering , Anisotropic, Multi – Layer in materials.

### UNIT IV

12Hrs

Working with Extended Parameters, Dynamic Properties, Using Compound Materials, Top/Bottom, Using v-ray Materials, Using Matte/Shadow Materials, v-ray template, Basic Material Extensions – Paint Controls – Ink Controls-Advanced Lighting v-ray – working with v-ray fur and hair for character modelling-

### UNIT V

12 Hrs

Introduction to 3d character modelling creation,-working with uv maps,-working 3d hair and fur in v-ray, applying texture to the character , 3D Maps, v-ray Cellular Map, Dent Map, Falloff Map, Marble Map, Noise Map, Particle Mblur map, Smoke Map, Splat Map, Stucco Map, Thin Wall v-ray Refraction Map- flat Mirror Map- Normal Mapping , UV Mapping, Unwrapping , Modifying Unwrap, Objects Mesh Flow.

Total No. of Hrs: 60

### TEXT BOOK:

- 1.Edgeloop Character Modeling For 3D Professionals-Kelly Murdock
- 2.Unity from Zero to Proficiency (Proficient) -Patrick Felicia

### REFERENCES:

- 1.Virtual Vixens: 3D Character Modeling and Scene Placement-Arndt von Koenigsmarck
2. 3D Modeling & Animation-Chandramouli, Magesh

# **PRACTICAL**

Subject Code	Subject Name : <b>Camera and Lenses</b>		C	L	T/SLr	P/R	Ty/Lb/ ETL					
<b>HBGA23ET1</b>	Prerequisite : None		3	1	0/0	4/0	ETP					
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits							T/L/ETL :					
Theory / Lab / Embedded Theory and Lab.												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>➤ Introduction to camera and its shots.</li> <li>➤ Students learn different types of lenses and its techniques.</li> <li>➤ Students can understand the types of lighting and the special effects.</li> <li>➤ To make the students to apply various light setups in indoor and outdoor.</li> <li>➤ Ensures the students can able to shoot professional photographs with golden hour.</li> </ul>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	Students learns about various camera and types											
<b>CO2</b>	To make students gain knowledge on different camera lenses											
<b>CO3</b>	Students gains knowledge on various lighting positions											
<b>CO4</b>	Students are trained about light setup											
<b>CO5</b>	Practical knowledge on different photography is provided											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	2	2	2	3	2	3	2	3			
CO2	3	3	3	3	1	3	3	1	3			
CO3	3	2	1	3	3	2	2	3	2			
CO4	3	3	3	3	1	2	1	3	2			
CO5	1	2	2	3	3	2	2	2	3			
COs/PSOs	PSO1			PSO2			PSO3			PSO4		
CO1	3			2			3					
CO2	3			3			2					
CO3	3			1			2					
CO4	3			2			2					
CO5	3			2			2					
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Interdisciplinary	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/Project	Internships/ Technical Skills	Soft Skills			
				✓								

Subject Code	Subject Name :	C	L	T/SLr	P/R	Ty/Lb/ETL
<b>HBGA23ET1</b>	<b>Camera and Lenses</b> Prerequisite : None	3	1	0/0	4/0	ETP
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab						

### Unit-I

9Hrs

Camera Types- Compact Digital Camera-Bridge Camera-DSLR-Mirror less Camera- Types of Camera Shots-Types of Angles-Triangle of photography-Movement-Camera ARC Shots-Composition Rules-180 degree-Rule of Third.

### Unit-II

9Hrs

Intro to Lenses- Prime-Tele- Macro- Wide Angel-Fish Eye Lens-Zoom Lens-Focal Length- Focusing Techniques-Focus Mode-Depth of Field- Exposure Mode-White Balance-Resolution

### Unit-III

9Hrs

Types of Lighting- Three Point Light- Rim-Loop-Split-Butterfly-Lighting for Portrait-Indoor and Outdoor photography Lighting-Types of Filters- UV-ND-Polarizing-colour-Night- Macro-Infrared-Special Effects Filters.

### Unit-IV

9Hrs

Create a studio light setup, create a portrait light setup, Create a Rim light setup. Create a split light for capturing portrait.

### Unit-V

9Hrs

Create a Photo album not less than 20, album includes Nature stills, Silhouette, Macro, Micro, Long exposure, High Shutter, Golden Hour.

**Total No. of Hrs: 45**

### Reference Books:

1. Al Judge, 2013, Understanding DSLR Lenses, CreateSpace Independent Publishing Platform.
2. Al Judge, 2014, Understanding Aperture & F-Stops, Create Space Independent Publishing
3. David Molnar, 2022, Learning to See: A Photographer's Guide from Zero to Your First Paid Gigs, Harper Horizon.

Subject Code	Subject Name : <b>3D Character Modeling Lab</b>		C	L	T/SLr	P/R	Ty/Lb/ ETL					
<b>HBGA23L04</b>	Prerequisite : None		2	0	0/0	2/2	Lb					
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits							T/L/ETL :					
Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<p>Make the student create 3D characters as per the specifications</p> <p>To give confidence to the student by making him to create industry oriented models</p> <p>Make him create photorealistic models with proper lightings</p> <p>To create new textures</p> <p>Ensures that the student to create models in the given time frame.</p>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	Students creates character model with suit											
<b>CO2</b>	Students creates super hero model with suit											
<b>CO3</b>	Student are made to learn the modelling process of four legged character											
<b>CO4</b>	Student are made to learn the modelling process of Robot											
<b>CO5</b>	To make the students design characters like Tom and Jerry											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/ POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	2	2	1	2	3	3	3			
CO2	3	3	2	3	2	3	3	1	3			
CO3	1	2	2	3	3	2	3	3	1			
CO4	3	2	3	3	2	2	1	3	1			
CO5	1	3	2	3	3	2	3	3	1			
COs/PSOs	PSO1			PSO2			PSO3			PSO4		
CO1	3			2			3					
CO2	3			3			2					
CO3	3			1			2					
CO4	3			2			2					
CO5	3			2			2					
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Interdisciplinary	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/ Project	Internships/ Technical Skills	Soft Skills			
							√					

Subject Code	Subject Name :	C	L	T/SLr	P/R	Ty/Lb/ ETL
<b>HBGA23L04</b>	<b>3D Character Modeling Lab</b> Prerequisite : None	2	0	0/0	2/2	Lb
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits Theory / Lab / Embedded Theory and Lab						T/L/ETL :

Create a 3D game Character with war suit.

- Create a super hero suit(e.g.: iron man, superman)
- Create four leg character with details
- Create robot character with details
- Create tom and cherry character with same reference.

**TOTAL - 30Hrs**

Subject Code	Subject Name : <b>PROJECT III- 3D Game Character Model</b>		C	L	T/SLr	P/R	Ty/ Lb/ ETL					
<b>HBGA23L05</b>	Prerequisite : None		4	0	0/0	8/0	Lb					
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits						T/L/ETL :						
Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
Make the student create 3D characters as per the specifications To give confidence to the student by making him to create industry oriented models Make him create photorealistic models with proper lightings To create new textures Ensures that the student to create models in the given time frame.												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	Students creates character model with suit											
<b>CO2</b>	Students creates super hero model with suit											
<b>CO3</b>	Student are made to learn the modelling process of four legged character											
<b>CO4</b>	Student are made to learn the modelling process of Robot											
<b>CO5</b>	To make the students design characters like Tom and Jerry											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	2	3	3	2	3	2	2			
CO2	1	3	3	2	1	3	3	2	3			
CO3	3	3	1	3	3	2	2	2	3			
CO4	1	3	2	3	1	2	3	3	2			
CO5	2	2	1	3	3	2	2	3	3			
COs/PSOs	PSO1			PSO2			PSO3			PSO4		
CO1	3			2			3					
CO2	3			3			2					
CO3	3			1			2					
CO4	3			2			2					
CO5	3			2			2					
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Interdisciplinary	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/Project	Internships/ Technical Skills	Soft Skills			
							√					

Subject Code	Subject Name : <b>PROJECT III- 3D Game Character Model</b>	C	L	T/SLr	P/R	Ty/Lb/ ETL
<b>HBGA23L05</b>	Prerequisite : None	4	0	0/0	8/0	Lb
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab						

### **PROJECT:**

Using 3dsstudio max creates a I - ROBOT. Apply proper materials for the Robot. The ROBOT should have legs , hands and a body and two eyes .

ROBOT should wear the spectacle or a shield .

Submit it as rendered output. Set proper lightings for the same and it should have a colorful back ground .

# **SEMESTER IV**

Subject Code	Subject Name : <b>UNITY 3D -LEVEL 2</b>		C	L	T/SLr	P/R	Ty/ Lb/ ETL					
<b>HBGA23005</b>	Prerequisite : None		4	3	0/1	0/0	Ty					
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits					T/L/ETL :							
Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
Ensures that the students learn to work on any kind of render time game render in the Computer Graphics industry.												
Enables the student to create environment for the games												
Learns to reduce the memory size of the characters and objects so as to use in Mobiles												
Makes him familiarize with the lights and shadow effects												
Make him understand the process of game creation												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	Students learns to create character using the view sheet											
<b>CO2</b>	Students are taught to design character using the shapes											
<b>CO3</b>	To make the students design a character with more detailing											
<b>CO4</b>	Students are trained to choose and design characters with differentiation											
<b>CO5</b>	To make the students learn to give actions to the characters											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	2	2	2	3	3	3	2	3			
CO2	1	2	3	1	1	3	3	3	3			
CO3	1	3	1	3	3	3	2	2	2			
CO4	3	2	2	3	1	3	3	2	2			
CO5	2	2	2	3	3	3	3	2	3			
COs/PSOs	PSO1			PSO2			PSO3			PSO4		
CO1	3			2			3					
CO2	3			3			2					
CO3	3			1			2					
CO4	3			2			2					
CO5	3			2			2					
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Interdisciplinary	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/Project	Internships/ Technical Skills	Soft Skills			
				√								

Subject Code	Subject Name :	C	L	T/SLr	P/R	Ty/Lb/ETL
<b>HBGA23005</b>	<b>UNITY 3D -LEVEL 2</b> Prerequisite : None	4	3	0/1	0/0	Ty
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab						

UNIT 1: **12 Hrs**

Views - Front view , 3/4 front view , Side view (profile),3/4 back view, back view - creating character turn around sheet- materials required - step by step process

Unit II: **12 Hrs**

Character Development - Definition - Working with Art tools - Shapes - Forms - Character Hierarchy - Shape Symbolism - Circle - Square - triangle - strong character creation

UNIT III: **12 Hrs**

Creating Model Sheets - Commission Analysis - short information - expanded meaning - personality of the character - Preparation Process - Skeleton Comparison - Muscular Comparison - Design - Silhouette

Unit IV **12 Hrs**

Choosing characters - main character - supporting character - types of characters - character identification - character development

Unit V **12 Hrs**

Defining the character - subtle touches - the visual element - binding the characters - making distinctive characters - creating line of actions

**TEXT BOOK:** **Total No. of Hrs: 60**

1.The Art of Game Design: A Book of Lenses - by Jesse Schell

2.Drawing Basics and Video Game Art - by CHRIS SOLARSKI

**REFERENCE:**

1.Unity Game Development Cookbook: Essentials for Every Game - by [Paris Buttfield-addis](#) ,[Jonathon Manning](#) ,[Tim Nugent](#) .

2.Unity 3d Ui Essentials - Simon Jackson

Subject Code	Subject Name : <b>ADVANCED CHARACTER MODELING MAYA</b>					C	L	T/SLr	P/R	Ty/Lb/ETL		
<b>HBGA23006</b>	Prerequisite : None					4	3	1/0	0/0	Ty		
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits										T/L/ETL :		
Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>To make the student understand about the interface</li> <li>Helps them to understand the different types of creating and editing tools</li> <li>Ensures him to create complicated 3D objects using modifiers</li> <li>Make him understand about the different types of cameras and their movements</li> <li>Enables him to create 3D characters and to set key frames as per the industry standards.</li> </ul>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	To make the students learn about the Interface of 3D modelling software.											
<b>CO2</b>	Making the students gain knowledge on the tools and working functions of software											
<b>CO3</b>	Students learn about the models using the options present in the software											
<b>CO4</b>	Students understand about camera and its operation in the software											
<b>CO5</b>	Students learn to animate using the principles of animation											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/ POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	2	2	2	3	2	3	2	3			
CO2	1	3	3	3	1	3	3	1	3			
CO3	1	2	1	3	3	2	2	3	2			
CO4	2	3	3	3	1	2	1	3	2			
CO5	1	2	2	3	3	2	2	2	3			
COs/PSOs	PSO1			PSO2			PSO3			PSO4		
CO1	3			2			3					
CO2	3			3			2					
CO3	3			3			2					
CO4	3			2			2					
CO5	3			2			2					
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Interdisciplinary	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/Project	Internships/Technical Skills	Soft Skills			
				√								

Subject Code	Subject Name :	C	L	T/SLr	P/R	Ty/Lb/ETL
<b>HBGA23006</b>	<b>ADVANCED CHARACTER MODELING MAYA</b>					
	Prerequisite : None	4	3	1/0	0/0	Ty
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab						

### UNIT I

**12 Hrs**

Introduction to Modeling , Exploring the Maya Interface, Customizing the Menu , Modeling menu , Techniques in Modeling – Polygon Modeling, Nurbs Modeling, subdivision surfaces modeling, Primitive Objects for games – Polygon Basics, Poly Editing Tools for games.

### UNIT II

**12 Hrs**

Transforms- Move Tool, Rotate Tool, Scale Tool , creating Simple models from primitives, Co-ordinate System, Object Pivot, setting the object pivot, keyboard short cuts, Creating object copies, instance copies- duplicate option, grouping combining objects.

### UNIT III

**12 Hrs**

Boolean operations – Booleans union, Booleans difference, Boolean intersection. New object creating using Boolean, Modeling using Object Components, Modifying object components, smooth modifier, duplicate special option, Box Modeling, Game models using extrude – face extrusion for games.

### UNIT IV

**12 Hrs**

Camera - Types of camera, View Port Camera, Turn Table Camera - Lights – Standard Lights, Mental Ray Rendering - Texturing : Normal Mapping, UV unwrapping, Mental Ray Shade's, Rendering Techniques-Rendering for games

### UNIT V

**12 Hrs**

Animation in Maya for games – Squash & Stretch- Anticipation – staging- straight ahead action and pose to pose action, follow through and overlapping action, ease – in and out, - Animation control menus – snap, Keys, Tangents, Playback Speed, Playback Looping, Play blast, Sound.

### TEXT BOOK:

**Total No of Hrs :60**

1.Mastering Autodesk Maya : Autodesk Official Press

2.Autodesk Maya - An Introduction to 3D Modeling

### REFERENCES:

1.*Maya Character Modelling* - Gary Oliverio,

2.*Mastering Autodesk Maya 2014*, Sybex Publications- Todd Palamar

# **PRACTICAL**

Subject Code	Subject Name : <b>ADVANCED CHARACTER ANIMATION MAYA</b>				C	L	T/SLr	P/R	Ty/Lb/ETL			
<b>HBGA23ET2</b>	Prerequisite : None				3	2	0/0	2/0	ETP			
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits								T/L/ETL :				
Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>Ensures the student is confident in creating advanced 3D object</li> <li>Make the student confident in creating human modeling.</li> <li>To make the student familiar in animating the characters</li> <li>Make him understand the usage of camera in viewing the objects</li> <li>Ensure that the students is able to create realistic animations with proper key framing</li> </ul>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	Students learns to create character for game											
<b>CO2</b>	To make the students learn about texturing process using UV mapping											
<b>CO3</b>	Students are made to learn about Arnold lighting and rendering											
<b>CO4</b>	Students gains knowledge on exporting the animation sequence as video											
<b>CO5</b>	Students are made to learn about default lighting and rendering											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/POs	PO 1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	2	2	3	2	3	2	3			
CO2	3	3	3	3	1	3	3	1	3			
CO3	3	2	1	3	3	2	2	3	2			
CO4	3	3	3	3	1	2	1	3	2			
CO5	2	2	2	3	3	2	2	2	3			
COs/PSOs	PSO1			PSO2			PSO3			PSO4		
CO1	3			2			3					
CO2	3			3			2					
CO3	3			3			2					
CO4	3			2			2					
CO5	3			2			2					
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Interdisciplinary	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/ Project	Internships/ Technical Skills	Soft Skills			
				√								

Subject Code	Subject Name :	C	L	T/SLr	P/R	Ty/Lb/ETL
<b>HBGA23ET2</b>	<b>ADVANCED CHARACTER ANIMATION MAYA</b> Prerequisite : None	3	2	0/0	2/0	ETP
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits Theory / Lab / Embedded Theory and Lab						T/L/ETL :

### UNIT – I

**9 Hrs**

Introduction to Game character Modeling in Maya , Exploring the Maya Interface, Customizing the Menu , Modeling menu , Techniques in Modeling – Polygon Modeling for Games, Nurbs Modeling, subdivision surfaces modeling, Primitive Objects – Polygon Basics, Poly Editing Tools.

### UNIT – II

**9 Hrs**

Introduction to UV maps for Games -planer -cylinder - working with UV mapping in Maya - working with UV editor -understand UV unwrapping . Maya to uv mapping .intro to x-gen - hair and fur for game characters- animation - hair & fur.-dynamic hair and fur -working mash - bifrost - introduction to boss dynamic

### UNIT – III

**9 Hrs**

Working with render setup – Arnold , hyper shade node, Arnold light -mesh light - HDRI light - sky dome . Arnold render setting , Batch render render sequence ,

### UNIT – IV

**9 Hrs**

Animation in Maya –working with track editor -working with dope sheet – snap, Keys, Tangents, Playback Speed, Playback Looping, Play blast, Sound.- adding time editor. exporting to fbx -importing fbx in Maya.

### UNIT – V

**9 Hrs**

Camera - Types of camera, View Port Camera, Arnold render setting - Lights – Standard Lights, Arnold render Rendering - Texturing : Normal Mapping, , Arnold shape - Rendering Techniques.

**Total No of Hrs :45**

### TEXT BOOK:

- 1.Mastering Autodesk Maya : Autodesk Official Press
- 2.Todd Palamar- *Mastering Autodesk Maya 2017*- Sybex Publications

### REFERNCES :

- 1.Maya Advanced Character Animation (paperback) Paperback by [LV XIN XIN](#)
2. Mastering the.Artof Exaggerated Animation (Required Reading Range) Paperback by [Keith Osborn](#) (Author)

Subject Code	Subject Name : <b>ADVANCED CHARACTER MODELING MAYA LAB</b>					C	L	T/SLr	P/R	Ty/Lb/ETL		
<b>HBGA23L06</b>	Prerequisite : None					2	0	0/0	2/2	Lb		
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits								T/L/ETL :				
Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>To make the student understand about the interface</li> <li>Helps them to understand the different types of creating and editing tools</li> <li>Ensures him to create complicated 3D objects using modifiers</li> <li>Make him understand about the different types of cameras and their movements</li> <li>Enables him to create 3D characters and to set key frames as per the industry standards</li> </ul>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	To make the students learn about the Interface of 3D modelling software.											
<b>CO2</b>	Making the students gain knowledge on the tools and working functions of software											
<b>CO3</b>	Students learn about the models using the options present in the software											
<b>CO4</b>	Students understand about camera and its operation in the software											
<b>CO5</b>	Students learn to animate using the principles of animation											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	2	2	2	3	2	3	2	3			
CO2	1	3	3	3	1	3	3	1	3			
CO3	1	2	1	3	3	2	2	3	2			
CO4	2	3	3	3	1	2	1	3	2			
CO5	1	2	2	3	3	2	2	2	3			
COs/PSOs	PSO1			PSO2			PSO3			PSO4		
CO1	3			2			3					
CO2	3			3			2					
CO3	3			3			2					
CO4	3			2			2					
CO5	3			2			2					
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Interdisciplinary	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/Project	Internships/ Technical Skills	Soft Skills			
							√					

Subject Code	Subject Name :	C	L	T/SLr	P/R	Ty/Lb/ ETL
<b>HBGA23L06</b>	<b>ADVANCED CHARACTER MODELING MAYA LAB</b>					
	Prerequisite : None	2	0	0/0	2/2	Lb
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits						T/L/ETL :
Theory / Lab / Embedded Theory and Lab						

Advanced Character Modeling - Maya Lab

- Create Dinosaur 3d Model In Maya
- Create Transformer 3d Model In Maya
- Create Any Human Organs In Maya
- Create A Ghost Character In Maya

**Total No of Hours-30 Hrs**

Subject Code	Subject Name : <b>PROJECT IV-3D GAME CHARACTER RIGGING ANIMATION</b>					C	L	T/SLr	P/R	Ty/Lb/ETL		
<b>HBGA23L07</b>	Prerequisite : None					4	0	0/0	8/0	Lb		
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>Ensures the student is confident in creating advanced game character with photorealism model with hair and fur details.</li> <li>Ensures that the students learn to work in any kind of 3d Rigging &amp; Animation</li> <li>Knows to import the 3D characters in Game engines</li> <li>Able to apply kinematics IK &amp; FK for characters</li> <li>Enhance him with the shortcut tools which helps him to do a fast work in work place</li> <li>Makes him to give a realistic character animation</li> </ul>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	Students learn to create character for game											
<b>CO2</b>	To make the students learn about texturing process using UV mapping											
<b>CO3</b>	Students are made to learn about Arnold lighting and rendering											
<b>CO4</b>	Students gain knowledge on exporting the animation sequence as video											
<b>CO5</b>	Students are made to learn about default lighting and rendering											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	2	2	3	2	3	2	3			
CO2	3	3	3	3	1	3	3	1	3			
CO3	3	2	1	3	3	2	2	3	2			
CO4	3	3	3	3	1	2	2	3	2			
CO5	1	2	2	2	3	2	2	2	3			
COs/PSOs	PSO1			PSO2			PSO3			PSO4		
CO1	3			2			3					
CO2	3			3			2					
CO3	3			3			2					
CO4	3			2			2					
CO5	3			2			2					
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Interdisciplinary	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/Project	Internships/Technical Skills	Soft Skills			
							√					

Subject Code	Subject Name : <b>PROJECT IV-3D GAME CHARACTER RIGGING ANIMATION</b>	C	L	T/SLr	P/R	Ty/Lb/ ETL
<b>HBGA23L07</b>	Prerequisite : None	4	0	0/0	8/0	Lb
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits						T/L/ETL :
Theory / Lab / Embedded Theory and Lab						

### **PROJECT IV-3D GAME CHARACTER RIGGING ANIMATION**

- Use a character model from the assets give it photorealistic effect, rig the character , apply x-gen hair and fur dynamic cloth simulation for character model
- Use Arnold render to get photorealistic output.
- Render the shaded character model and import this game character in any game engine .
- Give the output in the executable format .
- Use proper mapping and textures

# **SEMESTER - V**

<b>Subject Code</b>	<b>Subject Name :</b> <b>Allied IV-Substance Painter</b>		<b>C</b>	<b>L</b>	<b>T/SLr</b>	<b>P/R</b>	<b>Ty/Lb/ETL</b>					
<b>HBGA23ID2</b>	<b>Prerequisite : None</b>		<b>3</b>	<b>2</b>	<b>0/1</b>	<b>0/0</b>	<b>TY</b>					
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits							T/L/ETL :					
Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>Ensures that the students learn to create image maps</li> <li>Helps them to understand the different types of image maps</li> <li>Ensures him to paint and create new image maps</li> <li>Make him understand how to bring 3d models to painter</li> <li>Makes him familiarize with plugins</li> </ul>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	To make the students learn about the interface of Substance painter											
<b>CO2</b>	To teach the students about the software in Technical aspects.											
<b>CO3</b>	Students learn about texturing process in Substance painter by texture baking method											
<b>CO4</b>	Students gains knowledge on painting process											
<b>CO5</b>	Students gains knowledge on advanced texturing and projection method											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/ POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	2	3	2	1	2	3	2	3			
CO2	2	1	3	3	1	2	3	1	3			
CO3	3	2	1	3	3	2	2	3	2			
CO4	2	1	3	3	1	2	2	2	3			
CO5	1	3	2	3	3	2	2	2	3			
COs/PSOs	PSO1			PSO2			PSO3			PSO4		
CO1	3			2			3					
CO2	3			3			2					
CO3	3			1			2					
CO4	3			2			2					
CO5	3			2			2					
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Interdisciplinary	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/Project	Internships/ Technical Skills	Soft Skills			
		√										

Subject Code	Subject Name :	C	L	T/SLr	P/R	Ty/ Lb/ ETL
<b>HBGA23ID2</b>	<b>Allied IV-Substance Painter</b>					
	<b>Prerequisite : None</b>	<b>3</b>	<b>2</b>	<b>0/1</b>	<b>0/0</b>	<b>TY</b>
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab						

**UNIT I :** **9 Hrs**

Getting Started-Preparing the 3D Model -User Interface & Tools Overview -Basic PBR Texturing -Workflow - Rendering Overview - Main Menu - Sliders -Settings- Project Configuration - Toolbars- Properties- Viewport -Texture Set -Layer Stack -History -Shelf -Display Settings

**UNIT II :** **9 Hrs**

Importing 3d model in substance painter - working with Image Editing tools -types of brushes - working with 3d models

**UNIT III :** **9 Hrs**

Working with Maya to substance painter - Introduction to Texture baking - working with uv maps- Maya to substance masking -layers -layer mask -rendering - exporting final output as image maps

**UNIT IV:** **9 Hrs**

Importing substance painter3d to unity 3d - exporting maps - masking exporting maps - paint effect in substance painter

**UNIT V:** **9 Hrs**

Baking -Effects -smart Materials and Masks - Automatic UV Unwrapping - UV Reprojection - UV Tiles - Post ProcessingSubsurface Scattering - Iray Renderer - Plugins - Dynamic Material Layering - Sparse Virtual Textures.Custom Shaders

**Total No. of Hrs: 45**

**TEXT BOOK:**

- 1.Beginning PBR Texturing: Learn Physically Based Rendering with Allegorithmic's
2. Substance Painter - by Abhisheik Kumar

**REFERECE:**

<https://www.scribd.com/document/426545857/Substance-Painter-Documentation-pdf>

<b>Subject Code</b>	<b>Subject Name : UNREAL ENGINE FOR 3D</b>						<b>C</b>	<b>L</b>	<b>T/SLr</b>	<b>P/R</b>	<b>Ty/Lb/ETL</b>	
<b>HBGA23007</b>	<b>Prerequisite : None</b>						<b>4</b>	<b>3</b>	<b>0/1</b>	<b>0/0</b>	<b>Ty</b>	
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits										T/L/ETL :		
Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>• Make e student familiarize in installation and the tools</li> <li>• Enables him to learn about select and move multiple actors</li> <li>• Familiarize him with the viewports and viewing</li> <li>• Enables him to create nature's wonders</li> <li>• Make him understand about collisions and about game creation</li> </ul>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	Students learns the Interface of Unreal Engine											
<b>CO2</b>	To gain knowledge on different viewports present											
<b>CO3</b>	To provide knowledge on particular viewport with its purpose											
<b>CO4</b>	Students gains knowledge on creating atmosphere with its basic needs											
<b>CO5</b>	To make them learn about collisions and the purpose in detail											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/ POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	1	3	2	3	2	3	2	3			
CO2	3	3	3	3	1	3	3	1	3			
CO3	3	2	1	3	3	2	3	3	1			
CO4	3	3	3	3	1	2	1	3	2			
CO5	1	2	2	3	2	2	2	2	3			
COs/PSOs	PSO1			PSO2			PSO3			PSO4		
CO1	3			2			3					
CO2	3			3			2					
CO3	3			1			2					
CO4	3			1			2					
CO5	3			2			2					
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Interdisciplinary	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/ Project	Internships/ Technical Skills	Soft Skills			
				√								

Subject Code	Subject Name :	C	L	T/SLr	P/R	Ty\Lb/ ETL
<b>HBGA23007</b>	<b>UNREAL ENGINE FOR 3D</b>	<b>4</b>	<b>3</b>	<b>0/1</b>	<b>0/0</b>	<b>Ty</b>
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits						T/L/ETL :
Theory / Lab / Embedded Theory and Lab						

**UNIT I : 12 Hrs**

Introduction -registration & installation --project -levels- actors- difference between the Unreal Engine and the Unreal Editor- Level Editor - Viewport, Toolbar- Content Browser- Modes Panel-World Outliner- customize the interface- place Actors into a Level- different tabs of Place Mode -Lights

**UNIT II 12 Hrs**

Viewport I - Navigating Within the Viewport -Viewport - mouse navigation, WASD navigation, and Maya navigation  
 Viewport II –move, rotate, and scale tools. Learn how to -select multiple Actors and move them all at once.

Viewport III – snapping to perfectly align your Actors -with one another within your Level- Learn the difference between Surface Snapping- Grid Snapping, Rotation Snapping, and Scale

**UNIT III 12 Hrs**

Viewport IV – Different Ways To View Your Level- Content Browser I - Learn about the Sources Panel- Asset Window-searching- the Content Browser- and breadcrumbs.

**UNIT IV 12 Hrs**

Actors -Static Meshes -Brushes -Materials- Lights- Atmospheric Fog - Player Start- Components- Volumes- Creating the Sky

**UNIT V 12 Hrs**

Collisions- and collision properties -Simulation Generates Hit Events, Generate Overlap Events-Collision Enabled- , Physics Collisions Only, Query Collisions Only - difference between ECB Yes, ECB No, and ECB Owner.

**Total Hrs : 60**

**TEXT BOOK:**

Learning Unreal Engine Game Development: A step-by-step guide that paves the way for developing fantastic games with Unreal Engine 4 - **by Joanna Lee**

Unreal Engine 5 Character Creation, Animation, and Cinematics- Henk Venter

**REFERENCES:**

*3D Game Design with Unreal Engine 4 and Blender* - by Justin Plowman

Master the Art of Unreal Engine 4: Creating a 3D Point and Click Adventure- Ryanan shah

Subject Code	Subject Name : BASICS OF BLUEPRINT NODES					C	L	T/SLr	P/R	Ty/Lb/ ETL		
HBGA23008	Prerequisite : None					4	3	1/0	0/0	Ty		
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits								T/L/ETL :				
Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>Ensures that the students learns to work interactive links in game</li> <li>Learn how to work on collision in a game</li> <li>Make him familiarize with map nodes</li> <li>Learns to use Math and algorithm nodes</li> <li>Make him understand the techniques involved in integrating blueprint node outputs</li> </ul>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
CO1	Student gain Knowledge about blueprint variables											
CO2	Students learns about the structural variables in blueprint.											
CO3	Mastery of creating structures and control flow using nodes											
CO4	Understanding and utilizing events within blueprint to trigger actions based on game mechanics											
CO5	Integration of blueprint scripting within a larger game development project.											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/ POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	3	2	3	2	3	2	3			
CO2	3	3	3	3	1	3	3	1	3			
CO3	3	2	2	3	3	2	2	2	2			
CO4	3	3	3	3	1	2	1	2	3			
CO5	1	2	2	3	2	2	3	2	3			
COs/PSOs	PSO1			PSO2			PSO3			PSO4		
CO1	3			2			3					
CO2	3			2			2					
CO3	3			1			2					
CO4	3			2			2					
CO5	3			3			2					
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Interdisciplinary	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/ Project	Internships/ Technical Skills	Soft Skills			
				√								

Subject Code	Subject Name :	C	L	T/SLr	P/R	Ty/ Lb/ ETL
<b>HBGA23008</b>	<b>BASICS OF BLUEPRINT NODES</b>	<b>4</b>	<b>3</b>	<b>1/0</b>	<b>0/0</b>	<b>Ty</b>
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab						

### UNIT I

12 Hrs

Intro to blueprint nodes - events- mouse up - mouse down - clicks - custom events -blueprint variables - integer , boolean , variables ,strings

### UNIT II

12 Hrs

Structural variables in blueprints - arrays - blueprint maps -array nodes - array structural nodes - conditional statements

### UNIT III

12 Hrs

casting in blueprints -blueprint map nodes -add,clear ,contains height ,remove - blueprint set nodes - connecting nodes.

### UNIT IV

12 Hrs

Introduction to math - expression nodes -definition nodes, algorithm nodes - mobile patch utility nodes -random streams .

### UNIT V

12 Hrs

Concept of level blueprint -blueprint macro library -bitmask blueprint variables -Integrating blueprint node output

**Total No. of Hrs: 60**

**TEXT BOOK:***Blueprints Visual Scripting for Unreal Engine-* by Marcos Romero  
**Elevating Game Experiences with Unreal Engine 5-Gonaloo marques**

**REFERENCE:** *Unreal Engine 4 for Design Visualization: Developing Stunning Interactive Visualizations, Animations, and Renderings (Game Design)* - by Tom Shannon

<b>Subject Code:</b> <b>HBCC22002</b>	<b>Subject Name:</b> <b>ENTREPRENEURSHIP DEVELOPMENT</b>	<b>C</b>	<b>L</b>	<b>T / S.Lr</b>	<b>P/R</b>	<b>T/L/ ETL</b>
	<b>Prerequisite :</b> <b>Basic knowledge in entrepreneurship development</b>	<b>3</b>	<b>3</b>	<b>0/0</b>	<b>0/0</b>	<b>Ty</b>

L : Lecture, T : Tutorial,SLr : Supervised Learning, P: Project, R : Research, C : Credits, T/L/ETL :Theory / Lab / Embedded Theory and Lab

### OBJECTIVES

1. To enrich the students towards the knowledge of entrepreneurial skills and to make the students understand the approaches to attain the goals of the business.
2. To recognize the value of problem solving, effective business management and entrepreneurial thinking to business development.
3. To identify the key factors and be able to apply the key entrepreneurial process – command and control, calculated risk-taking and opportunity recognition to business development

### COURSE OUTCOMES (Cos)

Students completing this course Will be able to

CO1	Provide information related to entrepreneurship
CO2	Make students state the importance of entrepreneurial development
CO3	State the importance of business idea generations
CO4	Gain knowledge on various EDP organized by Government Sectors
CO5	Provide them the nature of economic development and entrepreneurial growth.

### Mapping of Course Outcome with Program Outcome (POs)

Sem	Coursecode:								
VI	Programme Outcomes(Pos)								
Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO1	2	3	2	3	3	3	3	2	3
CO2	3	3	3	3	3	3	3	3	3
CO3	3	2	3	3	2	3	3	3	2
CO4	2	3	2	3	3	3	3	2	3
CO5	3	3	3	3	2	3	2	3	3

Sem -VI	Programme Specific Outcomes(PSOs)								
Cos	PSO1			PSO2			PSO3		
CO1	3			3			2		
CO2	2			2			3		
CO3	3			3			2		
CO4	3			3			3		
CO5	3			2			3		

3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low

Category	Basic Sciences	Engg.Science	Humanities &social Science	Program Core	Program Elective	Open Elective	Practical/Project	Internships/ Skill component	Inter disciplinary
			√		√				

Subject Code:	Subject Name: ENTREPRENEURSHIP DEVELOPMENT	C	L	T / S.Lr	P/R	T/L/ ETL
HBCC22002	Prerequisite : Basic knowledge in entrepreneurship development	3	3	0/0	0/0	Ty
L : Lecture, T : Tutorial, SLr : Supervised Learning, P: Project, R : Research, C : Credits, T/L/ETL : Theory / Lab / Embedded Theory and Lab						

**UNIT I:** Concept of Entrepreneurship **9 HRS**  
Entrepreneurship - Meaning - Types - Qualities of an Entrepreneur - Classification of Entrepreneurs - Factors influencing Entrepreneurship - Functions of Entrepreneurs.

**UNIT II:** Entrepreneurial Development Agencies. **9 HRS**  
Commercial Banks - District Industries Centre - National Small Industries Corporation  
Small Industries Development Organisation - Small Industries Service Institute. All India Financial  
Institutions.SIPCOT and its objectives.MSME Sector and its coverage Objectives of Ministry of MSME.Role and  
Functions of MICRO Small and Medium Enterprises - Development Organisation (MSME - DO) - Objectives of  
SIDCO - Functions of Tamil Nadu SIDCO - IRBI and its Role. NABARD and its role in the Rural Development of  
India - Introduction to Micro Units Development Refinance Agency (MUDRA)

**UNIT III:** Project Management **9 HRS**  
Business idea generation techniques - Identification of Business opportunities – Feasibility study - Marketing, Finance,  
Technology & Legal Formalities - Preparation of Project Report- Tools of Appraisal.

**UNIT IV -** Entrepreneurial Development Programmes **9 HRS**  
Entrepreneurial Development Programmes (EDP) - Role, relevance and achievements – Role of Government in  
organizing EDPs- Critical evaluation

**UNIT V -** Economic Development and Entrepreneurial growth **9 HRS**  
Role of Entrepreneur in Economic growth - Strategic approaches in the changing Economic scenario for small scale  
Entrepreneurs - Networking, Niche play, Geographic Concentration, Franchising / Dealership - Development of  
Women Entrepreneurship. Self-help groups and empowerment of Women in India - Financing SHG and their role in  
Micro-financing. Financial inclusion and its penetration in India, Challenges and Government role in  
Financialinclusion–Pradhan Mantri Jan-Dhan Yojana - Six Pillars of Its Mission objectives

**Total No. of Hrs: 45**

**Books for Study :**

1. Saravanavel, P. Entrepreneurial Development, Principles, Policies and Programmes, EssPee Kay Publishing House - 1997, Chennai.
2. Tulsian, P.C & Vishal Pandey, Business Organization and Management, Pearson Education India, 2002, Delhi.

**Books for Reference :**

1. Janakiram, B, and Rizwana, M, Entrepreneurship Development, Text and Cases, ExcelBooks India, 2011, Delhi.
2. Arun Mittal & Gupta, S.L - Entrepreneurship Development, International Book House Pvt. Ltd, 2011, Mumbai.
3. Anil Kumar, S, Poornima, S, Abraham, K, Jayashree, K - Entrepreneurship Development, Newage International (P) Ltd, 2012, Delhi
4. Gupta C B and Srinivasan NP, Entrepreneurial Development, Sul

# **PRACTICAL**

Subject Code	Subject Name : GAME DESIGN FOR VR APPLICATION					C	L	T/SLr	P/R	Ty/Lb/ ETL		
HBGA23ET3	Prerequisite : None					3	2	0/0	2/0	ETP		
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits								T/L/ETL :				
Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>Enables the student to install the mobile applications</li> <li>Makes the student familiarize in creating elements for the game</li> <li>Enables him to give movements to characters</li> <li>Make him understand about collisions and their effects</li> <li>Ensures him to execute a game</li> </ul>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
CO1	Gain a solid understanding of virtual reality principles, techniques.											
CO2	Learn to design immersive and intuitive interactions tailored for virtual reality.											
CO3	Student develop skills in spatial deign to create engaging VR											
CO4	To develop skills in debugging and testing collision interaction .											
CO5	To develop project management skills specific to VR game design											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/ POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	2	3	3	1	2	3	2	3			
CO2	3	3	3	3	1	3	3	1	3			
CO3	3	2	1	3	2	2	2	3	2			
CO4	3	3	3	3	3	3	3	3	2			
CO5	1	2	2	3	2	3	2	2	3			
COs/PSOs	PSO1			PSO2				PSO3			PSO4	
CO1	3			2				3				
CO2	2			3				3				
CO3	3			1				2				
CO4	2			2				2				
CO5	3			2				3				
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Interdisciplinary	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/ Project	Internships/ Technical Skills	Soft Skills			
				√								

Subject Code	Subject Name :	C	L	T/SLr	P/R	Ty/ Lb/ ETL
<b>HBGA23ET3</b>	<b>GAME DESIGN FOR VR APPLICATION</b>	<b>3</b>	<b>2</b>	<b>0/0</b>	<b>2/0</b>	<b>ETP</b>
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab						

### UNIT I

**9 Hrs**

Introduction to mobile application - Installation and Setting Up - working with unity interface -mobile application - AR application- working knowledge for UI/UX-

### UNIT II

**9 Hrs**

Application development - - Starting with UI- Button - Text Element- The Slider - Materials and Shaders - The Particle System - Using the Asset Store.

### UNIT III

**9 Hrs**

Creating Sprites - Modifying Sprites -Transforms and Object Parenting- Internal Assets- - Saving and Loading Scenes- - Basic Movement Scripting.

### UNIT IV

**9 Hrs**

Understanding Collisions- Physical Rigid bodies - Custom Collision Boundaries - Understanding Prefabs - - Game Object Destruction.

### UNIT V

**9 Hrs**

Project planning and execution - project Development - working with concepts design- making project on live - digital planning and execution of game.

**Total No. of Hrs: 45**

### TEXT BOOK:

The Ultimate Guide to Video Game Writing and Design- by Flint Dille  
 Level Up! The Guide to Great Video Game Design- by WILEY

**REFERENCE:** <https://techbeacon.com/app-dev-testing/4-fundamentals-mobile-game-design>

<b>Subject Code</b>	<b>Subject Name :</b> <b>UNREAL ENGINE FOR 3D LAB</b>					<b>C</b>	<b>L</b>	<b>T/SLr</b>	<b>P/R</b>	<b>Ty/Lb/ETL</b>		
<b>HBGA23L08</b>	<b>Prerequisite : None</b>					<b>2</b>	<b>0</b>	<b>0/0</b>	<b>2/2</b>	<b>Lb</b>		
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits										T/L/ETL :		
Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>• Make e student familiarize in installation and the tools</li> <li>• Enables him to learn about select and move multiple actors</li> <li>• Familiarize him with the viewports and viewing</li> <li>• Enables him to create nature's wonders</li> <li>• Make him understand about collisions and about game creation</li> </ul>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	To create forest environment.											
<b>CO2</b>	To create classic environment city in maya.											
<b>CO3</b>	Students create a whole set design in unreal engine											
<b>CO4</b>	Students create a perfect house walk through.											
<b>CO5</b>	Student create class war place.											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	2	2	2	3	2	3	2	3			
CO2	3	3	3	3	1	3	3	1	3			
CO3	3	2	1	3	3	2	2	3	2			
CO4	3	3	3	3	1	2	1	3	2			
CO5	1	2	2	3	3	2	2	2	3			
COs/PSOs	PSO1			PSO2			PSO3			PSO4		
CO1	3			2			3					
CO2	3			3			2					
CO3	3			1			2					
CO4	3			2			2					
CO5	3			2			2					
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Interdisciplinary	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/Project	Internships/ Technical Skills	Soft Skills			
							√					

<b>Subject Code</b>	<b>Subject Name :</b> <b>UNREAL ENGINE FOR 3D LAB</b>	<b>C</b>	<b>L</b>	<b>T/SLr</b>	<b>P/R</b>	<b>Ty/Lb/ETL</b>
<b>HBGA23L08</b>	<b>Prerequisite : None</b>	<b>2</b>	<b>0</b>	<b>0/0</b>	<b>2/2</b>	<b>Lb</b>
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits Theory / Lab / Embedded Theory and Lab						T/L/ETL :

- Create a forest environment in unreal engine
- Create a classic environment city year 1935 in maya and unreal engine
- Create a new game set design in unreal engine
- Create a interior house walk through in unreal engine
- Create a class war place in unreal engine

**Total No of Hours-30 Hrs**

<b>Subject Code</b>	<b>Subject Name : PROJECT V - ENVIRONMENT LEVEL DESIGNING</b>						<b>C</b>	<b>L</b>	<b>T/SLr</b>	<b>P/R</b>	<b>Ty/Lb/ ETL</b>	
<b>HBGA23L09</b>	<b>Prerequisite : None</b>						<b>4</b>	<b>0</b>	<b>0/0</b>	<b>8/0</b>	<b>Lb</b>	
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits										T/L/ETL :		
Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>Ensures the student is confident in creating advanced game character with photorealism model with hair and fur details.</li> <li>Ensures that the students learns to work in any kind of 3d Rigging &amp; Animation</li> <li>Knows to import the 3D characters in Game engines</li> <li>Able to apply kinematics IK &amp; FK for characters</li> <li>Enhance him with the shortcut tools which helps him to do a fast work in work place</li> <li>Makes him to give a realistic character animation</li> </ul>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	Students learns to create character for game											
<b>CO2</b>	To make the students learn about texturing process using UV mapping											
<b>CO3</b>	Students are made to learn about Arnold lighting and rendering											
<b>CO4</b>	Students gains knowledge on exporting the animation sequence as video											
<b>CO5</b>	Students are made to learn about default lighting and rendering											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/ POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	2	2	2	3	2	3	2	3			
CO2	3	2	3	3	1	3	3	1	3			
CO3	3	2	3	3	2	2	2	2	2			
CO4	3	2	3	3	1	2	1	2	2			
CO5	1	2	2	3	3	2	2	3	3			
COs/PSOs	PSO1			PSO2			PSO3			PSO4		
CO1	3			1			3					
CO2	3			2			2					
CO3	2			1			3					
CO4	3			1			3					
CO5	3			2			2					
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Engg.Science	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/ Project	Internships/T echnical Skills	Soft Skills			
							√					

Subject Code	Subject Name : <b>PROJECT V - ENVIRONMENT LEVEL DESIGNING</b>	C	L	T/SLr	P/R	Ty/Lb/ETL
<b>HBGA23L09</b>	<b>Prerequisite : None</b>	<b>4</b>	<b>0</b>	<b>0/0</b>	<b>8/0</b>	<b>Lb</b>
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits Theory / Lab / Embedded Theory and Lab						T/L/ETL :

- Create a Level design - create a 3D city background or forest background using Unreal engine,
- using the arrows keys we have to move through the city or forest background .
- apply proper materials for the background objects ,
- set proper lightings . Final output to be in .exe format .

# **SEMESTER - VI**

<b>Subject Code</b>	<b>Subject Name : LAWS AND ETHICS FOR ANIMATION</b>			<b>C</b>	<b>L</b>	<b>T/SLr</b>	<b>P/R</b>	<b>Ty/Lb/ ETL</b>	
<b>HBAA22008</b>	<b>Prerequisite : None</b>			<b>3</b>	<b>3</b>	<b>0/0</b>	<b>0/0</b>	<b>Ty</b>	
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab									
<b>OBJECTIVES</b>									
<ul style="list-style-type: none"> <li>➤ To comprehend animation legalities, ethics, global standards, and risk mitigation strategies.</li> <li>➤ To explore representation, cultural sensitivity, responsible storytelling, and content.</li> <li>➤ To master licensing, distribution, contracts, and industry standards in animation distribution.</li> <li>➤ To effectively understand Global insights on animation laws, and ethics for effective global operation.</li> <li>➤ To understand how to reduce legal risks: strategy, clearance, handles disputes in animation production.</li> </ul>									
<b>COURSE OUTCOMES (Cos)</b>									
Students completing this course were able to									
<b>CO1</b>	Understand copyright and IP laws for animation content protection.								
<b>CO2</b>	Apply ethical considerations in animation production and storytelling.								
<b>CO3</b>	Navigate licensing agreements for animation distribution and usage.								
<b>CO4</b>	Recognize global animation legalities and industry standards.								
<b>CO5</b>	Mitigate risks through copyright clearance and legal dispute resolution.								
<b>Mapping of Course Outcome with Program Outcome (POs)</b>									
<b>Cos/ POs</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>
<b>CO1</b>	3	1	3	3	1	3	3	3	3
<b>CO2</b>	3	2	3	2	2	3	2	1	3
<b>CO3</b>	3	1	2	3	2	2	2	3	2
<b>CO4</b>	1	2	2	3	1	3	3	3	3
<b>CO5</b>	3	2	3	2	2	3	2	3	2
<b>COs/PSOs</b>	<b>PSO1</b>			<b>PSO2</b>			<b>PSO3</b>		
<b>CO1</b>	3			2			3		
<b>CO2</b>	2			1			2		
<b>CO3</b>	3			1			3		
<b>CO4</b>	3			1			2		
<b>CO5</b>	2			2			3		
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low									
<b>Category</b>	<b>Basic Sciences</b>	<b>Inter disciplinary</b>	<b>Humanities &amp; social Science</b>	<b>Program Core</b>	<b>Program Elective</b>	<b>Open Elective</b>	<b>Practical/ Project</b>	<b>Internships/ Technical Skills</b>	<b>Soft Skills</b>
				√					

<b>Subject Code</b>	<b>Subject Name :</b> <b>LAWS AND ETHICS FOR ANIMATION</b>	<b>C</b>	<b>L</b>	<b>T/SLr</b>	<b>P/R</b>	<b>Ty/Lb/ETL</b>
<b>HBAA22008</b>	<b>Prerequisite : None</b>	<b>3</b>	<b>3</b>	<b>0/0</b>	<b>0/0</b>	<b>Ty</b>
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab						

#### **UNIT I**

**9 Hrs**

Introduction to Animation Laws and Ethics: Legal and Ethical foundations of Animation - Copyright, Intellectual Property, and Content Creation: Ethical considerations.

#### **UNIT II**

**9 Hrs**

Copyright and Fair Use: Principles, Laws & case studies. Copyright Compliance in Animation-Ethical Dilemmas in Character Representation- Creative Expression and Cultural Sensitivity.

#### **UNIT III**

**9 Hrs**

Licensing and Distribution: Distribution Contracts and role of contracts in animation production and distribution. Licensing Agreements: Types of Licensing Agreements - Key Terms and Negotiation- Copyright and Ownership- Royalties and Compensation- Legal Considerations and Contract Drafting.

#### **UNIT IV**

**9 Hrs**

Ethical Issues in Animation: Analyzing ethical dilemmas in animation, such as cultural sensitivity, representation, and responsible storytelling, and discussing strategies for addressing these issues. Sensitive Themes Handling - Inclusivity and Diversity-Child Audiences-Environmental Impact.

#### **UNIT V**

**9 Hrs**

Global Animation Copyright-Cross-Border Distribution - Trade Agreements Impact - IP Enforcement Strategies. International Animation Laws and Industry Standards: Understanding global animation laws, international treaties, industry standards, and how they impact animation production and distribution on a global scale.

**Total No. of Hrs: 45**

#### **TEXT BOOK:**

"**Animation Law: A Practical Guide**" by Susan Davis and Jeffrey P. Hermes

"**Animation and the Law**" by Daniel J. Gervais

#### **Reference:**

"**Entertainment Law and Business: A Guide to the Law and Business Practices of the Entertainment Industry**" by William D. Henslee, J. M. Dabner, and Geoffery Scott

"**Animation Rules!: Words: Book One**"- Jr. Mclaughlin, Dan F.

<b>Subject Code :</b>	<b>Subject Name UNIVERSAL HUMAN VALUES</b>	<b>C</b>	<b>L</b>	<b>T/SLr</b>	<b>P/R</b>	<b>Ty/Lb/ETL</b>
<b>HBCC22ET1</b>	<b>Prerequisite : None</b>	<b>3</b>	<b>3</b>	<b>0/0</b>	<b>0/0</b>	<b>ETP</b>

L : Lecture T : Tutorial SLr : Supervised Learning P : Project R : Research C: Credits  
T/L/ETL : Theory / Lab / Embedded Theory and Lab

**OBJECTIVES :**

- Describe meaning, purpose, and relevance of universal human values.
- Understand the importance of values in individual, social, career, and national life.
- Learn from lives of great and successful people who followed and practiced human values and achieved self-actualization.
- Understand and practice professional ethics with the goal for the universal wellness

**COURSE OUTCOMES (Cos) :**

Students completing the course were able to

CO1	Become conscious practitioners of values
CO2	Realize their potential as human beings and conduct themselves properly in the ways of the world.
CO3	Develop integral life skills with values
CO4	Inculcate and practice them consciously to be good human beings.
CO5	Practice professional ethics with the goal for the universal wellness

**Mapping of Course Outcomes with Program Outcomes (POs)**

COs/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO1	3	2	2						
CO2	3	0	1						
CO3	3	1	1						
CO4	3	2	2						
CO5	3	2	2						

Category	Basic Sciences	Interdisciplinary	Humanities & Social Sciences	Program core	Program Electives	Open Electives	Practical / Project	Internships / Technical Skills	Soft Skills
			✓						

<b>Subject Code :</b>	<b>Subject Name UNIVERSAL HUMAN VALUES</b>	<b>C</b>	<b>L</b>	<b>T/SLr</b>	<b>P/R</b>	<b>Ty/Lb/ETL</b>
<b>HBCC22ET1</b>	<b>Prerequisite : None</b>	<b>3</b>	<b>3</b>	<b>0/0</b>	<b>0/0</b>	<b>ETP</b>
L : Lecture T : Tutorial SLr : Supervised Learning P : Project R : Research C: Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab						

**Unit 1** Love and Compassion:

Love and its forms: love for self, parents, family, friend, spouse, community, nation, humanity, nature and other beings—living and non-living. Love and compassion and inter-relatedness, Individuals who are remembered in history for love and compassion and what will learners gain if they practice love and compassion

Related activities: Sharing learner's individual and/or group experience(s), community outreach program to manifest love and compassion toward people and nature, Simulated Situations, Case studies

**UNIT 2:**

Truth and Righteousness: Universal truth, truth as value (artha), truth as fact (satya), veracity, sincerity, honesty among others. Understanding righteousness, Righteousness and dharma, righteousness and propriety, Individuals who are remembered in history for practicing truth and righteousness and what will learners gain if they practice Truth and Righteousness

Sharing learner's individual and/or group experience(s), exercises on ease with truth can be recalled consistently, Simulated Situations, Case studies

**Unit 3:**

Non-Violence and Peace; pre-requisites for non-violence- Love, compassion, empathy, and sympathy, Ahimsa as non-violence and non-killing, the impact of practicing non-violence-Peace, harmony and balance, Individuals and organizations that are known for their commitment to non-violence and peace, and what will learners gain if they practice non-violence and work towards peace

Sharing learner's individual and/or group experience(s), Simulated Situations, Case studies

**Unit 4:**

Renunciation (Sacrifice) Tyaga: Renunciation and sacrifice, developing a balance between enjoyment and sacrifice, Bhoga(enjoyment) with tyagabhava and tyaga (Sacrifice) with bhogabhava is the root of all human and literary values, enjoying life and freedom with responsibility and What will learners learn/gain if they practice renunciation and sacrifice

Social outreach programs for sharing and caring experience, expressing gratitude, Sharing learner's individual and/or group experience(s), Simulated Situations , Case studies

**Unit 5:**

Professional Ethics: Understanding Acceptance of human values and Ethical Human Conduct, Basis for Humanistic Education, Humanistic Constitution and Humanistic Universal Order, Developing Competence in professional ethics and practicing it, to utilize the professional competence for augmenting universal human order and create people friendly eco-friendly identify the scope and characteristics of people friendly and eco-friendly systems for the wellness of the universe as a whole.

Exercises to propagate people friendly eco-friendly activities both creative and functional, Brain storming, Sharing learner's individual and/or group experience(s), Simulated Situations , Case studies

References and Suggested Readings:

Human Values and Professional Ethics by R R Gaur, R Sangal, G P Bagaria, Excel Books,New Delhi, 2010

The Story of My Experiments with Truth - by Mohandas Karamchand Gandhi

Basham, A.L. 1954. The Wonder That Was India. London: Picador Press.

Basu, D.D. 2015. Workbook on the Constitution of India, Paperback Edition. Nagpur: Lexisnexis.

Ghosh, Sri Aurobindo. 1998. The Foundations of Indian Culture. Pondicherry: Sri Aurobindo Ashram.

Joshi, Kireet. 1997. Education for Character Development. Delhi: Dharam Hinduja Centre of Indic Studies.

Milton, Rokeach. 1973. The Nature of Human Values. New York: The Free Press.

Mookerji, Radha K. 1989. Ancient Indian Education. Delhi: Motilal Banarasidass

Saraswati, Swami Satyananda .2008. Asana Pranayama Mudra Bandha. Munger, India: Bihar School of Yoga.

# **Internship - Elective**

<b>Subject Code</b>	<b>Subject Name : INTERNSHIP-MOBILE GAME CREATION-UNITY</b>					<b>C</b>	<b>L</b>	<b>T/SLr</b>	<b>P/R</b>	<b>Ty/Lb/ ETL</b>		
<b>HBGA23L10</b>	<b>Prerequisite : None</b>					<b>5</b>	<b>0</b>	<b>0/0</b>	<b>10/0</b>	<b>Lb</b>		
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits								T/L/ETL :				
Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>Enables the student to create interface design</li> <li>Makes him to apply materials and textures</li> <li>Enables him to create augmented reality applications</li> <li>Make him to give controls for the game characters</li> <li>Enables him to create mobile games</li> </ul>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	To create game application and widget properties .											
<b>CO2</b>	Students gains knowledge about surface materials .											
<b>CO3</b>	Students learn about augmented reality and their control panel											
<b>CO4</b>	Knowledge about the controls and applying properties											
<b>CO5</b>	Student learn about behavior of bolt and bolt nodes											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	1	3	2	2	3	3	2	3			
CO2	3	3	3	3	1	3	3	1	3			
CO3	3	2	1	3	3	2	2	3	2			
CO4	3	3	3	3	1	2	1	3	2			
CO5	1	2	2	3	3	2	2	2	3			
COs/PSOs	PSO1			PSO2				PSO3			PSO4	
CO1	3			2				3				
CO2	3			3				2				
CO3	2			1				2				
CO4	2			2				2				
CO5	3			2				2				
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Inter disciplinary	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/ Project	Internships/ Technical Skills	Soft Skills			
								√				

<b>Subject Code</b>	<b>Subject Name :</b> <b>INTERNSHIP-MOBILE GAME CREATION-UNITY</b>	<b>C</b>	<b>L</b>	<b>T/SLr</b>	<b>P/R</b>	<b>Ty/Lb/ ETL</b>
<b>HBGA23L10</b>	<b>Prerequisite : None</b>	<b>5</b>	<b>0</b>	<b>0/0</b>	<b>10/0</b>	<b>Lb</b>
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab						

1. Students go to internship to hands on training and experience from industry for postproduction works and gain practical knowledge.
2. Students will submit the daily activity report as project and viva will be conducted for final examination.

<b>Subject Code</b>	<b>Subject Name :</b> <b>INTERNSHIP - PC GAME CREATION- UNREAL ENGINE</b>						<b>C</b>	<b>L</b>	<b>T/SLr</b>	<b>P/R</b>	<b>Ty/Lb/ ETL</b>	
<b>HBGA23L11</b>	<b>Prerequisite : None</b>						<b>5</b>	<b>0</b>	<b>0/0</b>	<b>10/0</b>	<b>Lb</b>	
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits										T/L/ETL :		
Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>• Enables the student to bring characters from other applications</li> <li>• Makes him to apply materials and textures</li> <li>• Enables him to set proper lightings and textures</li> <li>• Allows him to create play area for the game</li> <li>• Enables him to work with unreal motion graphics</li> </ul>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	<b>Students learns about interface designing dor a seamless game experience</b>											
<b>CO2</b>	<b>Students attain proficiency in using blueprint visual scripting</b>											
<b>CO3</b>	<b>Develop knowledge about light affect and light actors</b>											
<b>CO4</b>	<b>To create a play area using brushes and materials</b>											
<b>CO5</b>	<b>Students learn about umg and huds ,publishing and distribution</b>											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	2	2	2	3	2	3	2	3			
CO2	3	3	3	3	1	3	3	1	3			
CO3	3	2	1	3	2	2	2	3	2			
CO4	3	3	3	3	1	2	1	3	2			
CO5	3	2	3	3	3	2	3	3	3			
COs/PSOs	PSO1			PSO2			PSO3			PSO4		
CO1	3			1			3					
CO2	3			2			2					
CO3	2			1			3					
CO4	2			1			3					
CO5	3			2			3					
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Inter disciplinary	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/ Project	Internships/ Technical Skills	Soft Skills			
								√				

<b>Subject Code</b>	<b>Subject Name :</b> <b>INTERNSHIP - PC GAME CREATION- UNREAL ENGINE</b>	<b>C</b>	<b>L</b>	<b>T/SLr</b>	<b>P/R</b>	<b>Ty/Lb/ ETL</b>
<b>HBGA23L11</b>	<b>Prerequisite : None</b>	<b>5</b>	<b>0</b>	<b>0/0</b>	<b>10/0</b>	<b>Lb</b>
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab						

1. Students go to internship to hands on training and experience from industry for postproduction works and gain practical knowledge.
2. Students will submit the daily activity report as project and viva will be conducted for final examination.

<b>Subject Code</b>	<b>Subject Name : INTERNSHIP- LEVEL DESIGNING</b>						<b>C</b>	<b>L</b>	<b>T/SLr</b>	<b>P/R</b>	<b>Ty/Lb/ ETL</b>		
<b>HBGA23L1 2</b>	<b>Prerequisite : None</b>						<b>5</b>	<b>0</b>	<b>0/0</b>	<b>10/0</b>	<b>Lb</b>		
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits											T/L/ETL :		
Theory / Lab / Embedded Theory and Lab													
<b>OBJECTIVES</b>													
<ul style="list-style-type: none"> <li>To make the Student create assets for the games</li> <li>Makes him to add lights and controlling it to occupy less memory as in the industry</li> <li>Enables him to give navigation</li> <li>Make him create realistic textures</li> <li>Learns to implement and give interaction in the game</li> </ul>													
<b>COURSE OUTCOMES (Cos)</b>													
Students completing this course were able to													
<b>CO1</b>	<b>Student understand level design integrates with overall game design .</b>												
<b>CO2</b>	<b>Students gain knowledge about tools in unity and texturing effect .</b>												
<b>CO3</b>	<b>To learn about blueprint collision and working with buttons</b>												
<b>CO4</b>	<b>To create maps in unreal engine and image optimization.</b>												
<b>CO5</b>	<b>Students to be updated with level design including procedural generation</b>												
<b>Mapping of Course Outcome with Program Outcome (POs)</b>													
Cos/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	
CO1	2	2	2	2	3	2	3	2	3				
CO2	3	2	3	3	1	3	3	1	3				
CO3	3	2	3	3	2	2	2	3	3				
CO4	3	2	3	3	1	2	1	3	2				
CO5	2	1	2	3	3	2	2	2	3				
COs/PSOs	PSO1			PSO2				PSO3			PSO4		
CO1	3			2				3					
CO2	3			1				3					
CO3	3			1				3					
CO4	2			2				2					
CO5	3			1				2					
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low													
Category	Basic Sciences	Inter disciplinary	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/ Project	Internships/ Technical Skills	Soft Skills				
								√					

<b>Subject Code</b>	<b>Subject Name :</b> <b>INTERNSHIP- LEVEL</b> <b>DESIGNING</b>	<b>C</b>	<b>L</b>	<b>T/SLr</b>	<b>P/R</b>	<b>Ty/Lb/</b> <b>ETL</b>
<b>HBGA23L12</b>	<b>Prerequisite : None</b>	<b>5</b>	<b>0</b>	<b>0/0</b>	<b>10/0</b>	<b>Lb</b>
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits						T/L/ETL :
Theory / Lab / Embedded Theory and Lab						

1. Students go to internship to hands on training and experience from industry for postproduction works and gain practical knowledge.
2. Students will submit the daily activity report as project and viva will be conducted for final examination.

# **Portfolio - Elective**

<b>Subject Code</b>	<b>Subject Name : PORTFOLIO DEVELOPMENT- MOBILE GAME CREATION</b>					<b>C</b>	<b>L</b>	<b>T/SLr</b>	<b>P/R</b>	<b>Ty/Lb/ ETL</b>		
<b>HBGA23L13</b>	<b>Prerequisite : None</b>					<b>12</b>	<b>0</b>	<b>0/0</b>	<b>24/0</b>	<b>Lb</b>		
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits										T/L/ETL :		
Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>• Enable the student to create a mobile game as per industry standards</li> <li>• Enhances him to create characters for the game</li> <li>• Make the student job oriented by making him to create demo reels as per norms</li> <li>• Enable the student to create realistic backdrops</li> <li>• Make him confident by making him to deliver the projects within set duration enabling to maintain deadlines</li> </ul>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
CO1	<b>Understand fundamental principles of designing games for mobile platform.</b>											
CO2	<b>Learn prototyping techniques and iterate on game concepts</b>											
CO3	<b>To create Characters map with textures .</b>											
CO4	<b>Students create a walkthrough that move around on key presses</b>											
CO5	<b>To create characters animated with proper sound effect .</b>											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	2	2	3	2	3	2	3			
CO2	3	2	3	3	1	3	3	1	3			
CO3	3	2	3	3	2	2	2	3	3			
CO4	3	2	3	3	1	2	1	3	2			
CO5	2	1	2	3	3	2	2	2	3			
COs/PSOs	PSO1			PSO2				PSO3			PSO4	
CO1	3			2				3				
CO2	3			1				3				
CO3	3			1				3				
CO4	2			2				2				
CO5	3			1				2				
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Inter disciplinary	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/ Project	Internships/ Technical Skills	Soft Skills			
							√					

<b>Subject Code</b>	<b>Subject Name :</b> <b>PORTFOLIO DEVELOPMENT- MOBILE GAME CREATION</b>	<b>C</b>	<b>L</b>	<b>T/SLr</b>	<b>P/R</b>	<b>Ty/Lb/ ETL</b>
<b>HBGA23L13</b>	<b>Prerequisite : None</b>	<b>12</b>	<b>0</b>	<b>0/0</b>	<b>24/0</b>	<b>Lb</b>
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab						

Create your portfolio for a 3D mobile game play through , animate the characters , gaming can be fighter games or car games , game player should move around

Portfolio should include the following :

- 1) Newly created game character
- 2) Characters to be animated and proper sound effects to be added in the required places
- 3) Characters should be mapped with textures and proper lights to set
- 2) Game walkthrough and the character should move around on key presses and proper coillison effects

<b>Subject Code</b>	<b>Subject Name : PORTFOLIO DEVELOPMENT-PC GAME CREATION</b>					<b>C</b>	<b>L</b>	<b>T/SLr</b>	<b>P/R</b>	<b>Ty/Lb/ ETL</b>		
<b>HBGA23L14</b>	<b>Prerequisite : None</b>					<b>12</b>	<b>0</b>	<b>0/0</b>	<b>24/0</b>	<b>Lb</b>		
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits								T/L/ETL :				
Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>• Enable the student to create a game for PC as per industry standards</li> <li>• Enhances him to create characters for the game</li> <li>• Make the student job oriented by making him to create demo reels as per norms</li> <li>• Enable the student to create realistic backdrops</li> <li>• Make him confident by making him to deliver the projects within set duration enabling to maintain deadlines</li> </ul>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	<b>Understand fundamental principles of designing games for PC platform.</b>											
<b>CO2</b>	Develop programming and scripting skills necessary for PC game development.											
<b>CO3</b>	Understand the principles of 2D and 3D graphics, as well as sound design considerations.											
<b>CO4</b>	Understand optimization techniques for different hardware specifications.											
<b>CO5</b>	Learn testing methodologies for PC games.											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	2	2	3	2	3	2	3			
CO2	3	2	3	3	1	3	3	1	3			
CO3	3	2	3	3	2	2	2	3	3			
CO4	3	2	3	3	1	2	1	3	2			
CO5	2	1	2	3	3	2	2	2	3			
COs/PSOs	PSO1			PSO2			PSO3			PSO4		
CO1	3			2			3					
CO2	3			1			3					
CO3	3			1			3					
CO4	2			2			2					
CO5	3			1			2					
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Inter disciplinary	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/ Project	Internships/ Technical Skills	Soft Skills			
							√					

<b>Subject Code</b>	<b>Subject Name :</b> <b>PORTFOLIO DEVELOPMENT-PC GAME CREATION</b>	<b>C</b>	<b>L</b>	<b>T/SLr</b>	<b>P/R</b>	<b>Ty/Lb/ ETL</b>
<b>HBGA23L14</b>	<b>Prerequisite : None</b>	<b>12</b>	<b>0</b>	<b>0/0</b>	<b>24/0</b>	<b>Lb</b>

Create your portfolio for a 3D PC game play through , animate the characters , gaming can be hide and seek or war games or cooking games

Portfolio should include the following :

- 1) Newly created game character
- 2) characters to be animated and proper sound effects to be added in the required places
- 3) characters should be mapped with textures and proper lights to set
- 4) character should be interactive with key presses and mouse clicks

<b>Subject Code</b>	<b>Subject Name : PORTFOLIO DEVELOPMENT - LEVEL DESIGNING</b>						<b>C</b>	<b>L</b>	<b>T/SLr</b>	<b>P/R</b>	<b>Ty/Lb/ ETL</b>	
<b>HBGA23L15</b>	<b>Prerequisite : None</b>						<b>12</b>	<b>0</b>	<b>0/0</b>	<b>24/0</b>	<b>Lb</b>	
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits											T/L/ETL :	
Theory / Lab / Embedded Theory and Lab												
<b>OBJECTIVES</b>												
<ul style="list-style-type: none"> <li>• Enable the student to create a Level designing as per industry standards</li> <li>• Enhances him to create characters for the game</li> <li>• Make the student job oriented by making him to create demo reels as per norms</li> <li>• Enable the student to create realistic backdrops and navigate</li> <li>• Make him confident by making him to deliver the projects within set duration enabling to maintain deadlines</li> </ul>												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	Learn about the game development life cycle and the role of level design within it.											
<b>CO2</b>	Understand the tools and features available in the chosen game engine for level design.											
<b>CO3</b>	Develop skills in spatial design, including creating engaging and immersive environments.											
<b>CO4</b>	Develop problem-solving skills related to level design challenges.											
<b>CO5</b>	Develop strategies for identifying and fixing issues within game levels.											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/ POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	2	2	3	2	3	2	3			
CO2	3	2	3	3	1	3	3	1	3			
CO3	3	1	3	3	1	2	2	3	3			
CO4	3	2	3	3	1	2	1	3	2			
CO5	2	1	2	3	3	2	2	2	3			
COs/PSOs	PSO1			PSO2			PSO3			PSO4		
CO1	3			2			3					
CO2	3			1			3					
CO3	3			1			3					
CO4	2			2			2					
CO5	3			1			2					
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Inter disciplinary	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/ Project	Internships/ Technical Skills	Soft Skills			
							√					

<b>Subject Code</b>	<b>Subject Name :</b> <b>PORTFOLIO DEVELOPMENT - LEVEL DESIGNING</b>	<b>C</b>	<b>L</b>	<b>T/SLr</b>	<b>P/R</b>	<b>Ty/Lb/ ETL</b>
<b>HBGA23L15</b>	<b>Prerequisite : None</b>	<b>12</b>	<b>0</b>	<b>0/0</b>	<b>24/0</b>	<b>Lb</b>
L : Lecture T : Tutorial SLr : Supervised Learning P: Project R : Research C : Credits T/L/ETL : Theory / Lab / Embedded Theory and Lab						

Create a Modern city or forest or cowboy city village in unity 3d or unreal engine

- Apply respective textures and backgrounds
- Navigate the scene with respective assets
- Add first player .
- Navigate the scene with up arrow & down arrow for moving the scene
- Use play stop button for user interface design

# **FOREIGN LANGUAGE**

Subject Code	Subject Name : <b>FRENCH</b>		Ty/ Lb/ ETL/IE	L	T/SLr	P/R	C					
<b>HBFL22I01</b>	Prerequisite : Nil		<b>IE</b>	<b>1</b>	<b>0/0</b>	<b>1/0</b>	<b>1</b>					
<b>C:</b> Credits, <b>L:</b> Lecture, <b>T:</b> Tutorial, <b>SLr:</b> Supervised Learning, <b>P:</b> Problem / Practical <b>R:</b> Research, <b>Ty/Lb/ETL/IE:</b> Theory /Lab/Embedded Theory and Lab/Internal Evaluation												
<b>OBJECTIVES</b>												
To understand the main idea and some detailed aspects of complex and unfamiliar texts. Know emerging awareness of aesthetic properties of language and literary style. Recognize the role of cultural knowledge in understanding written texts.												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	Learn to write numbers, alphabets, regular and irregular verbs											
<b>CO2</b>	Practice preposition and articles.											
<b>CO3</b>	Comprehend model verbs and speak in future											
<b>CO4</b>	Familiarize colours, places and create phrases											
<b>CO5</b>	Master conjugation and speaking the language											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/ POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1										3		2
CO2										3		2
CO3										3		2
CO4										3		2
CO5										3		2
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Engg.Science	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/Project	Internships/Techni cal Skills	Soft Skills			
			√									

Subject Code	Subject Name : <b>FRENCH</b>	Ty/ Lb/ ETL/IE	L	T/SLr	P/R	C
<b>HBFL22I01</b>	Prerequisite : Nil	<b>IE</b>	<b>1</b>	<b>0/0</b>	<b>1/0</b>	<b>1</b>

### **UNIT I**

**6 Periods**

Les Salutations, Les Nombres (1-20), Les alphabets, Les Pronoms Sujets, Les Langues, Les Nationalités, Les Verbes : Parler, être, avoir,

### **UNIT II**

**6 Periods**

Les Nombres (21-100), L'heure, Les Pays, Les propositions des pays, Les articles définis, Les articles indéfinis, Les Verbes : s'appeler, Aimer et habiter.

### **UNIT III**

**6 Periods**

Les verbes : Aller, Venir, Les Articles Contractés, La Négation, Les Adjectifs Démonstratifs, Futur Proche, Model Verbs, Adjectifs Possessifs.

### **UNIT IV**

**6 Periods**

Les articles partitifs, Les Verbes : Faire, Jouer. La Famille, Les Couleurs, Les lieux dans la ville,

### **UNIT V**

**6 Periods**

Les Verbes: Lire, Écrire, Regarder, Voir, Écouter, Entendre

**Total periods: 30**

#### **TEXT BOOKS:**

1. Écho A1, J.Girardet & J.Pecheur, CLE International, 2<sup>nd</sup> Edition
2. Saison A1, Jean Giraudoux, Goyal publisher, 1<sup>st</sup> Edition

#### **REFERENCE BOOKS:**

1. Alter Ego A1, Veronique M Kizirian & Annie Berthet, Hachette, 1<sup>st</sup> Edition
2. Cosmopolite A1, Nathalie Hirschsprung & Tony Tricot, Goyal Publisher 1<sup>st</sup> edition

**HBFL22I01 FRENCH - Details in English for contents of each unit**

**Unit - I**

Introduction to French words through the greetings and simple vocabulary like numbers, languages, nationalities are taught. Concept of conjugation of regular and irregular verbs.

**Unit - II**

More focus on grammatical elements like prepositions and articles. Various scenarios inclusive of the parts of speech learnt are to be discussed and practiced. Complete vocabulary for numbers and therefore practices how to say time.

**Unit - III**

Comprehension of demonstrative and possessive adjectives and the concept of model verbs is introduced. Simple understanding of 'Futurprôche' which enables the student to speak in future tense. Building negative sentences with different verbs.

**Unit - IV**

Learning vocabulary in most common categories like colours, places etc. and picking up on creating French phrases of right construct. Focus primarily on speaking and writing.

**Unit - V**

Learning essential verbs of regular actions in French that are more frequent in our daily life and thus mastering conjugations and speaking from the top of our heads. More familiarity towards language is therefore attained.

**Total periods: 30**

**TEXT BOOKS:**

1. Écho A1, J.Girardet & J.Pecheur, CLE International, 2<sup>nd</sup> Edition
2. Saison A1, Jean Giraudoux, Goyal publisher, 1<sup>st</sup> Edition

**REFERENCE BOOKS:**

1. Alter Ego A1, Veronique M Kizirian & Annie Berthet, Hachette, 1<sup>st</sup> Edition
2. Cosmopolite A1, Nathalie Hirschsprung & Tony Tricot, Goyal Publisher 1<sup>st</sup> edition

Subject Code	Subject Name : <b>GERMAN</b>		Ty/ Lb/ ETL/IE	L	T/SLr	P/R	C					
<b>HBFL22I02</b>	Prerequisite : Nil		<b>IE</b>	<b>1</b>	<b>0/0</b>	<b>1/0</b>	<b>1</b>					
C: Credits, L: Lecture, T: Tutorial, SLr: Supervised Learning, P: Problem / Practical R: Research, Ty/Lb/ETL/IE: Theory /Lab/Embedded Theory and Lab/Internal Evaluation												
<b>OBJECTIVES</b>												
To understand the main idea and some detailed aspects of complex and unfamiliar texts. Know emerging awareness of aesthetic properties of language and literary style. Recognize the role of cultural knowledge in understanding written texts.												
<b>COURSE OUTCOMES (Cos)</b> Students completing this course were able to												
<b>CO1</b>	Learn to write numbers, alphabets, regular and irregular verbs											
<b>CO2</b>	Practice preposition and articles.											
<b>CO3</b>	Comprehend model verbs and speak in future											
<b>CO4</b>	Familiarize colours, places and create phrases											
<b>CO5</b>	Master conjugation and speaking the language											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/ POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1										3		2
CO2										3		2
CO3										3		2
CO4										3		2
CO5										3		2
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Engg.Science	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/ Project	Internships/ Technical Skills	Soft Skills			
			√									

Subject Code	Subject Name :	Ty/ Lb/ ETL/IE	L	T/SLr	P/R	C
<b>HBFL22I02</b>	Prerequisite : Nil	<b>IE</b>	<b>1</b>	<b>0/0</b>	<b>1/0</b>	<b>1</b>

### **UNIT - I**

**6 Periods**

Das Alphabet, Die Zahlen von ein -hundert, Begrüßung, Verabschiedung ,Sich Vortstellen , W – Fragen. Grammatik :- W- Frage, Aussagesatz, Verban und Personnelpronomen

### **UNIT - II**

**6 Periods**

Genders in Deutsch,,Die Personelpronomen, Definite /Indefinite / Negative Articles, Jemanden kennenlernen, Landkarte. Grammatik – bestimmter Artikel : der, die , das , Nomen: Singular und Plural, aussagesatz, negationartikel

### **UNIT - III**

**5 Periods**

Possessivpronomen, Verbkonjugation, Ja/Nein Fragen, Satzstruktur Grammatik : Regelmäßige, Unregelmäßige, hilfsverben- Sein/haben, Unbestimmer Artikel

### **UNIT - IV**

**5 Periods**

Wie spät ist es, Tageszeiten, Die, Wochentage, Die Monate, das Wetter, Die Himmelsrichtungen, Die familie, Klassenzimmer – Substantive , Countries and Languages, Negation , Like /Dislike. Grammatik: Akkusative, Verben mit accusative, wörterorden und lernen, artikel im dativ, Präposition mit +Dativ

### **UNIT - V**

**5 Periods**

Nominativ, Dativ, Accusative, Einkaufen, Im Flugzueg, Im kaufhaus, Jobsuche. Grammatik : Personalpronomen im Akkusativ mich, dich, modelverban müssen, können, wollen

**Total periods: 30**

### **TEXT BOOKS & REFERENCE BOOKS:**

1. Schritte International, Daniela Niebisch, Fraz Speeht, Angela Pude
2. Netzwerk A1, Stefanie Dengler, Paul Rusch, Helen Schmitz, Tanja Sieber

**Unit - I**

Alphabet- Numbers from 1 to 100 - Greetings and Goodbye- Self Introduction  
W questions - Grammar

**Unit - II**

Genders in German - Personal Pronoun (For Conjugation) - Definite /Indefinite /  
Negative Articles - Ask about others - (MAP and Possition of Land) – Grammar

**Unit - III**

Possessive Pronoun- Verb Conjugation- Yes /No Question - Sentence making in  
German – Grammar

**Unit - IV**

what time is it ?, Times of the day - The Week days and Months) - The Weather,  
Directions - The Family - Substantive , Countries and Languages - Class Room – Substantive  
Countries and its Languages - Negation , Like /Dislike – Grammar

**Unit - V**

Accusative - Shopping - In Flight - In departmental store - Job search  
Grammar

**Total periods: 30**

**TEXT BOOKS & REFERENCE BOOKS:**

1. Schritte International, Daniela Niebisch, Fraz Speeht, Angela Pude
2. Netzwerk A1, Stefanie Dengler, Paul Rusch, Helen Schmitz, Tanja Sieber

Subject Code	Subject Name : <b>JAPANESE</b>		Ty/ Lb/ ETL/IE	L	T/SLr	P/R	C					
<b>HBFL22I03</b>	Prerequisite : Nil		<b>IE</b>	<b>1</b>	<b>0/0</b>	<b>1/0</b>	<b>1</b>					
C: Credits, L: Lecture, T: Tutorial, SLr: Supervised Learning, P: Problem / Practical R: Research, Ty/Lb/ETL/IE: Theory /Lab/Embedded Theory and Lab/Internal Evaluation												
<b>OBJECTIVES</b>												
To understand the main idea and some detailed aspects of complex and unfamiliar texts. Know emerging awareness of aesthetic properties of language and literary style. Recognize the role of cultural knowledge in understanding written texts.												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	Learn to write Roumaji script, Able to self intro duce themselves, Will have knowledge of Hiragana and also able to speak about their Family membres. Count up to 100.											
<b>CO2</b>	Able to count up tp 10,000, Will have knowledge of Katakana Alphabets, Will be able identify the body parts. Able to understand pronouns.											
<b>CO3</b>	Analyze Varied particles and also the existential verbs. Will be able to count using the concept of Counters.											
<b>CO4</b>	Will get knowledge of the two different types of adjectives both I ending and Na ending adjectives and frame different sentences with these two.											
<b>CO5</b>	Master the conjugation of 24 forms of the verbs.											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/ POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1										3		2
CO2										3		2
CO3										3		2
CO4										3		2
CO5										3		2
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Engg.Science	Humanities & social Science	Program Core	Program Elective	Open Elective	Practical/Project	Internships/Techn ical Skills	Soft Skills			
			√									

Subject Code	Subject Name :	Ty/ Lb/ ETL/IE	L	T/SLr	P/R	C
<b>HBFL22I03</b>	Prerequisite : Nil	<b>IE</b>	<b>1</b>	<b>0/0</b>	<b>1/0</b>	<b>1</b>

**UNIT - I**

**5 Periods**

Introduction, Romaji, Hiragana, Self Introduction, Family relations, Numbers(1-100)

**UNIT - II**

**5 Periods**

Numbers (101-1000), Numbers (1001-10,000), Katakana, Body parts, and Pronouns

**UNIT - III**

**8 Periods**

Introduction to particles (wa, mo, ka, desu, ni, ga, de), Imasu, Arimasu, Couters

**UNIT - IV**

**5 Periods**

Adjective i-ending, and Na Ending

**UNIT - V**

**7 Periods**

Verbs (24 forms)

**Total periods: 30**

**TEXT BOOKS:**

1. Genki, Eri Bnno, Yoka Ikeda, Yutaka Ohno, Chikkao Shinogawa, Kyoko Tokoshiki, The Japanese Publishing Company

**REFERENCE BOOKS:**

1. Minna No Nihongo, 3A Corporation, Goyal Publication

Subject Code	Subject Name : <b>ARABIC</b>		Ty/ Lb/ ETL/IE	L	T/SLr	P/R	C					
<b>HBFL22I04</b>	Prerequisite : Nil		<b>IE</b>	<b>1</b>	<b>0/0</b>	<b>1/0</b>	<b>1</b>					
C: Credits, L: Lecture, T: Tutorial, SLr: Supervised Learning, P: Problem / Practical R: Research, Ty/Lb/ETL/IE: Theory /Lab/Embedded Theory and Lab/Internal Evaluation												
<b>OBJECTIVES</b>												
To learn, speak, write and do basic conversation in Arabic Language												
<b>COURSE OUTCOMES (Cos)</b> Students completing this course were able to												
<b>CO1</b>	Learn alphabets, vowels and gender											
<b>CO2</b>	Ask questions, numerbs and counting											
<b>CO3</b>	Converse in a public place in Arabic											
<b>CO4</b>	Identify and speak about food, weather etc											
<b>CO5</b>	Analyze verbs, tenses, singular and plural											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/ POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1										3		2
CO2										3		2
CO3										3		2
CO4										3		2
CO5										3		2
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Engg.Science	Humanities & Social Science	Program Core	Program Elective	Open Elective	Practical/ Project	Internships/ Technical Skills	Soft Skills			
			✓									

Subject Code	Subject Name : <b>ARABIC</b>	Ty/ Lb/ ETL/IE	L	T/SLr	P/R	C
<b>HBFL22I04</b>	Prerequisite : Nil	<b>IE</b>	<b>1</b>	<b>0/0</b>	<b>1/0</b>	<b>1</b>

### **UNIT - I**

**6 periods**

Alphabets – Greetings – question words – meeting people first time – introduction – introducing family members

Grammar – Present simple, long and short vowels, masculine and feminine distinctions

### **UNIT - II**

**6 periods**

Asking questions -describing city, capital cities, towns countries – numbers and counting – how many – how much – buying and selling

Grammar – negation to present form – moon letters – genitive case – spelling rules for Hamza, Idafa

### **UNIT - III**

**6 periods**

Eating and drinking – talking about ethnic foods and favourite cuisines – communicative phrases at public places – questions with what

Grammar – Group words – past tense – plural and joint cases

### **UNIT - IV**

**6 periods**

Describing weather – trips and adventures -camping – school trips

Grammar – future tense, verbs in plural

### **UNIT - V**

**6 periods**

Time and everyday routine – making comparison – days of week – comparing past and present

Grammar – Negative statements – pronouns - superlatives

**Total periods: 30**

### **TEXT BOOKS & REFERENCE BOOKS:**

1. The Essentials Arabic., Rafiel Imad Faynan., Arabic Edition Publisher
2. Gateway to Arabic, Imran.H.Alawiye, Paperback publisher

Subject Code	Subject Name : <b>CHINESE</b>		Ty/ Lb/ ETL/IE	L	T/SLr	P/R	C					
<b>HBFL22I05</b>	Prerequisite : Nil		<b>IE</b>	<b>1</b>	<b>0/0</b>	<b>1/0</b>	<b>1</b>					
C: Credits, L: Lecture, T: Tutorial, SLr: Supervised Learning, P: Problem / Practical R: Research, Ty/Lb/ETL/IE: Theory /Lab/Embedded Theory and Lab/Internal Evaluation												
<b>OBJECTIVES</b>												
This is a beginning level course in Chinese Mandarin, including introduction of phonetics and daily expressions. It is aimed at students with no prior knowledge of Chinese.												
<b>COURSE OUTCOMES (Cos)</b> Students completing this course were able to												
<b>CO1</b>	Basic understanding of Chinese Mandarin											
<b>CO2</b>	Do conversations of daily living such as greetings											
<b>CO3</b>	Acquaint exchange personal information, making an inquiry on time, etc											
<b>CO4</b>	Acquire listening, speaking, and reading skills in Chinese Mandarin.											
<b>CO5</b>	Use the language in real life scenarios and for everyday conversational communications.											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/ POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1										3		2
CO2										3		2
CO3										3		2
CO4										3		2
CO5										3		2
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Engg.Science	Humanities & Social Science	Program Core	Program Elective	Open Elective	Practical/ Project	Internships/ Technical Skills	Soft Skills			
			√									

Subject Code	Subject Name : <b>CHINESE</b>	Ty/ Lb/ ETL/IE	L	T/SLr	P/R	C
<b>HBFL22I05</b>	Prerequisite : Nil	<b>IE</b>	<b>1</b>	<b>0/0</b>	<b>1/0</b>	<b>1</b>

### UNIT - I

**6 periods**

Introduction of Chinese language Initials and finals, read initials: b, p, m, f, d, t, n, l, g, k, h  
Be able to read finals: a, o, e, i, u, ü, ai, ei, ao, ou, an, en, ang, new words combined with tones greet people using: How do you do?

### UNIT - II

**6 periods**

Initials: j, q, x, z, c, s, zhi, chi, shi, r finals: eng, ong, ia, iao, ie, -iu, ian, in, iang, ing, iong, er  
new words combined with tones greet people using: How are you?

### UNIT - III

**6 periods**

Finals: ua, uo, uai, ui, uan, uen, un, uang, ueng, üe, üan, ün

New words combined with tones o count numbers count date, month and year greet people using: Are you busy with your work?

### UNIT - IV

**6 periods**

New words questions with “吗” questions with interrogative pronouns adjectival predicate acquaintance using: May I know your name?

### UNIT - V

**6 periods**

Sentences with a verbal predicate attributivegenitive use the “是” sentence acquaintance using: Let me introduce..

**Total periods: 30**

### TEXT BOOKS & REFERENCE BOOKS:

1. The first 100 Chinese Characters, Laurence Mathews, Tuttle Publishers
2. Learning Mandarin Chinese, Version2, Yi Ren, Tuttle Publishers

Subject Code	Subject Name : <b>RUSSIAN</b>		Ty/ Lb/ ETL/IE	L	T/SLr	P/R	C					
<b>HBFL22I06</b>	Prerequisite : Nil		<b>IE</b>	<b>1</b>	<b>0/0</b>	<b>1/0</b>	<b>1</b>					
C: Credits, L: Lecture, T: Tutorial, SLr: Supervised Learning, P: Problem / Practical R: Research, Ty/Lb/ETL/IE: Theory /Lab/Embedded Theory and Lab/Internal Evaluation												
<b>OBJECTIVES</b>												
This is a beginning level course in Chinese Mandarin, including introduction of phonetics and daily expressions. It is aimed at students with no prior knowledge of Chinese.												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	Acquaint Phonetics – Alphabets and sounds											
<b>CO2</b>	Use different types of nouns and self introduce.											
<b>CO3</b>	Identify general vocabulary and greet in the language											
<b>CO4</b>	Identify and apply sounds with different stems and word construction											
<b>CO5</b>	Construct and speak sentences in the language											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1										3		2
CO2										3		2
CO3										3		2
CO4										3		2
CO5										3		2
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Engg Science	Humanities & Social Science	Program Core	Program Elective	Open Elective	Practical/Project	Internships/ Technical Skills	Soft Skills			
			√									

Subject Code	Subject Name : <b>RUSSIAN</b>	Ty/ Lb/ ETL/IE	L	T/SLr	P/R	C
<b>HBFL22I06</b>	Prerequisite : Nil	<b>IE</b>	<b>1</b>	<b>0/0</b>	<b>1/0</b>	<b>1</b>

#### **UNIT - I**

**6 periods**

Phonetics: Alphabets and Sounds, Voice and vowels, Voice and Voiceless – Consonants - Self Intro, Self Name in Russian Language

#### **UNIT - II**

**6 periods**

Etho construction, SthoEtho, KmoEtho - Animates and Inanimate nouns

#### **UNIT - III**

**6 periods**

General Vocabulary, Answering the objects with Etho on interrogatives SthoEtho and Kmotho? - Greetings of the Day on various timings

#### **UNIT - IV**

**6 periods**

Alphabets , sounds with Hard stems - Gender of Nouns, Demonstrative Pronouns using vocabulary and simple word constructions - General words on regular us: Excuse me, May I Come in, Excuse me, Thank you and see you again

#### **UNIT - V**

**6 periods**

Revision of Vocabulary, New Words, Greetings and other Day to day usage of sentences

**Total periods: 30**

#### **TEXT BOOKS & REFERENCE BOOKS:**

1. Russian for beginners, Gateway Guides, Kindle Edition
2. Learn to speak & Write Russian, Vasuda Bhaskar, Chatter Singh Publishers.

Subject Code	Subject Name : <b>SPANISH</b>		Ty/ Lb/ ETL/IE	L	T/SLr	P/R	C					
<b>HBFL22I07</b>	Prerequisite : Nil		<b>IE</b>	<b>1</b>	<b>0/0</b>	<b>1/0</b>	<b>1</b>					
<b>C:</b> Credits, <b>L:</b> Lecture, <b>T:</b> Tutorial, <b>SLr:</b> Supervised Learning, <b>P:</b> Problem / Practical <b>R:</b> Research, <b>Ty/Lb/ETL/IE:</b> Theory /Lab/Embedded Theory and Lab/Internal Evaluation												
<b>OBJECTIVES</b>												
To understand the main idea and some detailed aspects of complex and unfamiliar texts. Know emerging awareness of aesthetic properties of language and literary style. Recognize the role of cultural knowledge in understanding written texts.												
<b>COURSE OUTCOMES (Cos)</b>												
Students completing this course were able to												
<b>CO1</b>	Learn to write numbers, alphabets, regular and irregular verbs											
<b>CO2</b>	Practice preposition and articles.											
<b>CO3</b>	Comprehend model verbs and speak in future											
<b>CO4</b>	Familiarize colours, places and create phrases											
<b>CO5</b>	Master conjugation and speaking the language											
<b>Mapping of Course Outcome with Program Outcome (POs)</b>												
Cos/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1										3		2
CO2										3		2
CO3										3		2
CO4										3		2
CO5										3		2
3/2/1 Indicates Strength Of Correlation, 3 – High, 2- Medium, 1- Low												
Category	Basic Sciences	Engg.Science	Humanities & Social Science	Program Core	Program Elective	Open Elective	Practical/Project	Internships/Technical Skills	Soft Skills			
			√									

Subject Code	Subject Name : <b>SPANISH</b>	Ty/ Lb/ ETL/IE	L	T/SLr	P/R	C
<b>HBFL22I07</b>	Prerequisite : Nil	<b>IE</b>	<b>1</b>	<b>0/0</b>	<b>1/0</b>	<b>1</b>

### **UNIT - I**

**5 periods**

Los Saludos y Despedidas, Los Alfabetos, Los Numeros (1-20), Sonidos y Letras: H, C/Qa, G/J, B/V, C/Z, R, R/rr, Ch, G/Gu, Ll, N, Aficiones.

### **UNIT - II**

**5 periods**

Los Numeros(21-100), Pronombres Personales: Yo, Tu, El, Eyya, Nosotros, Vosotros, Ustedes, Usted. Ser verbos: Soy, Eres, Es, Somos, Sois, Son. Nacionalidad, Profesiones.

### **UNIT - III**

**5 periods**

Singular y Plural, Conversion de Singular a Plural. Masculino y Feminino, conversion de masculino a femenino. Tener verbos: Tengo, Tienes, Tiene, Tenemos, Teneis, Tienen. Llevar verbos.

### **UNIT - IV**

**10 periods**

Vocabulario de Colores, Casa, Bebidas, Ciudad, Clima, Colegio, Comida, Medios, Saludos, Verduras. Articulos definidos, Articulos indefinidos.

### **UNIT - V**

**5 periods**

Estar verbos: Estoy, Estas, Esta, Estamos, Estais, Estan. Reflexive verbos: Me, Te, Se, Nos, Os, Se. Cuantificadores, Preguntar y Responder.

**Total periods: 30**

### **TEXT BOOK:**

1. Aula internacional 1, Jaime Corpas & Eva Garcia, diffusion, Nueva edicion

### **REFERENCE BOOK:**

1. Grammatica de uso A1-B2, Luis Aragonés, Ramon Palencia, smeLe, Nueva edicion

**UNIT - I**

Introduction of Spanish words through the greetings, goodbyes, hobbies. Simple vocabulary like numbers (1 – 20) and alphabets. Pronunciation of H, C/Qa, G/J, B/V, C/Z, R, R/rr, Ch, G/Gu, Ll, N are taught.

**UNIT - II**

Focusing on grammatical elements like subject pronouns and irregular verbs. Complete vocabulary for numbers, Nationality and professions. Therefore, practice how to say time, phone number, Nationality and profession.

**UNIT - III**

Singular and plural forms of noun and conversion from singular to plural. Identifying the nouns as masculine or feminine. Conversion of nouns from masculine to feminine. Focusing on Tener and Llevar verbs.

**UNIT – IV**

Learning vocabulary in most common categories like colours, Houses, Drinks, City, Climate, Foods. Learning both definite and indefinite articles. More focusing on reading, writing and speaking.

**UNIT – V**

More focusing on grammatical elements like Estar verbs and Reflexive verbs usually used in everyday life, Quantification like much , more .More familiarity towards language is therefore attained.

**Total periods: 30**

**TEXT BOOK:**

1. Aula internacional 1, Jaime corpas & Eva Garcia, diffusion, Nueva edicion

**REFERENCE BOOK:**

1. Grammatica de uso A1-B2, Luis Aragones, Ramon Palencia, smeLe, Nueva edicion