



Avinashilingam Institute for Home Science and Higher Education for Women

(Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A by MHRD)

Re-accredited with A++ Grade by NAAC. CGPA 3.65/4, Category I by UGC

Coimbatore - 641 043, Tamil Nadu, India

Department of Information Technology & Centre for Machine Learning and Intelligence

B.Sc. Augmented Reality and Virtual Reality

Programme Outcomes

The Graduates will be able to

1. Attain and apply fundamental knowledge in basic concepts of Science
2. Gain Competence to communicate effectively
3. Develop critical thinking for innovations
4. Identify problems and suggest appropriate scientific, technological and environmental solutions.
5. Function individually or as a team in work environment
6. Acquire research skills to inquire, synthesize and articulate solution for community development.
7. Create and apply ICT tools for learning and technology development
8. Exhibit professional ethics and norms for social development
9. Implement acquired knowledge in basic sciences for self directed and lifelong learning
10. Promote entrepreneurial skills

Programme Specific Outcomes

1. Acquire strong programming skills in relevant languages and frameworks for creating AR and VR applications, and be able to troubleshoot & optimize code.
2. Aware of the ethical and legal issues surrounding AR and VR, including privacy, data security, content ownership, and potential societal impacts.
3. Equipped with the knowledge and skills to pursue higher education, assess market opportunities, develop business plans, and potentially start their own AR and VR-related ventures.

Scheme of Instruction & Examinations
(for students admitted from 2024-2025 & onwards)

Part	Subject Code	Name of paper / Component	Hours of instruction/ week		Scheme Examination					
					Duration of exam	CIA	CE	Total	Credit	
	First Semester		Theory	Practicals						
I	23BLT001/ 23BLH001/ 23BLF001	பொதுத்தமிழ்தாள் I- இக்காலஇலக்கியம்/ Prose and Non Detailed Texts/ French	2	-	3	50	50	100	2	
II	23BAEEC1	Ability Enhancement Compulsory Course –I English for Communication	4	-	3	50	50	100	4	
	Generic Elective									
		Generic Elective – I	5+1 / 4+4		3	50	50	100	6	
III	Discipline Specific Core Course									
	24BAVC01	Elements of Multimedia	4	-	3	50	50	100	4	6
	24BAVC01P	Multimedia Tools – Practical I	-	4	3	50	50	100	2	
	24BAVC02	Visual Design	4	-	3	50	50	100	4	6
	24BAVC02P	Visual Design - Practical II	-	4	3	50	50	100	2	
IV	23BVBNC1/ 23BVBNS1/ 23BVBSP1	Skill Enhancement Course Value Based Course Elective I- NCC/NSS/Sports	3/2		2	60	40	100	4/1/1	
		Games – Practical	1	-	-	-	-	-	-	
	Total								28/25	
	Second Semester									
I	23BLT002/ 23BLH002/ 23BLF002	பொதுத்தமிழ்தாள் II - அறஇலக்கியம் / Grammar, Translation and General Essay / French II	2	-	3	50	50	100	2	
II	23BAEES1	Ability Enhancement Compulsory Course - II Environmental Studies	4	-	3	50	50	100	4	
	Generic Electives									
	23BENGE2A/ 23BENGE2B/ 23BENGE2C/ 23BENGE2D	Generic Elective– II Introduction to Literature / British Literature / Modern Indian Literature / New Literatures in English	5+1	-	3	50	50	100	6	

III	Discipline Specific Core Courses									
	24BAVC03	Computer Problem Solving	4	-	3	50	50	100	4	6
	24BAVC03P	Computer Problem Solving - Practical III	-	4	3	50	50	100	2	
	24BAVC04	User Interface Design	4	-	3	50	50	100	4	6
24BAVC04P	User Interface Design – Practical IV	-	4	3	50	50	100	2		
IV	23BVBNC2/ 23BVBNS2/ 23BVBSP2	Skill Enhancement Course Value Based Course Elective I- NCC / NSS / Sports	3/2		2	60	40	100	4/1/1	
		Games – Practical	1	-	-	-	-	-	-	
	Total								28/25	
	Internship during summer vacation for 15 days									
	Third Semester									
I	23BLT003/ 23BLH003/ 23BLF003	பொதுத்தமிழ்தாள் III - சமயஇலக்கியம்/Ancient and Modern Poetry / French III	2	-	3	50	50	100	2	
II	Generic Elective									
		Generic Elective III	5+1 / 4+4		3	50	50	100	6	
III	Discipline Specific Core Courses									
	24BAVC05	3D Design	5+1	-	3	50	50	100	6	
	24BAVC06	Game Design Foundation	4	-	3	50	50	100	4	6
	24BAVC06P	Level Design- Practical V	-	4	3	50	50	100	2	
IV		Skill Enhancement Courses	-							
	23BSBCS1	Skill Based Compulsory Course – I Communication Skill	-	4	3	50	50	100	2	
		Skill Based Elective Course – II	-	4	3	50	50	100	2	
	23BVBNC3/ 23BVBNS3/ 23BVBSP3	Value Based Course Elective I – NCC / NSS / Sports	3/2		2	60	40	100	4/1/1	
		Value Based Course Elective II	2	-	-	100	-	100	2	
	Total								30/27	
	Fourth Semester									
I	23BLT004/ 23BLH004/ 23BLF004	பொதுத்தமிழ்தாள் IV - சங்கஇலக்கியம்/ Introduction to Functional Hindi and Journalism / French IV	2	-	3	50	50	100	2	
II	Generic Elective									
		Generic Elective IV	5+1 / 4+4		3	50	50	100	6	

III	Discipline Specific Core Courses										
	24BAVC07	Introduction to C# Scripting	4	-	3	50	50	100	4	6	
	24BAVC07P	Video Editing – Practical VI	-	4	3	50	50	100	2		
	24BAVC08	3D Game Development	5+1	-	3	50	50	100	6		
IV	Skill Enhancement Courses										
	23BSBSS1	Skill Based Compulsory Course – III Soft Skill	-	4	3	50	50	100	2		
		Skill Based Elective Course – IV	-	4	3	50	50	100	2		
	23BVBNC4/ 23BVBNS4/ 23BVBSP4	Value Based Course Elective I –NCC / NSS / Sports	3/2		2	60	40	100	4/1/1		
		Value Based Course Elective III	2	-	-	100	-	100	2		
	Total									30/27	
	Internship during summer vacation for 15 days										
	Fifth Semester										
III	Discipline Specific Core Courses										
	24BAVC09	Introduction to Virtual Reality	4	-	3	50	50	100	4	6	
	24BAVC09P	360 Video Design- Practical VII	-	4	3	50	50	100	2		
	24BAVC10	Sound Design and Editing	4	-	3	50	50	100	4	6	
	24BAVC10P	Unity VR Development - Practical VIII	-	4	3	50	50	100	2		
	Discipline Specific Elective Courses										
	24BAVDE1- 6	DSE – I									
		Theory + Practical / Theory + Tutorial	4+4/5+1		3	50	50	100	6		
	24BAVDE1- 6	DSE – II									
		Theory + Practical / Theory + Tutorial	4+4/5+1		3	50	50	100	6		
IV	Skill Enhancement Courses										
	23BVBNC5/ 23BVBNS5/ 23BVBSP5	Value Based Course Elective I – NCC / NSS / Sports	3/2		2	60	40	100	4/1/1		
	Total									28/25	
	Sixth Semester										
III	Discipline Specific Core Courses										
	24BAVC11	Introduction to Augmented Reality	4	-	3	50	50	100	4	6	
	24BAVC11P	Augmented Reality Development - Practical IX	-	4	3	50	50	100	2		
	24BAVC12	Introduction to Mixed Reality	4	-	3	50	50	100	4	6	
	24BAVC12P	Digital Production Development		4	3	50	50	100	2		
	Discipline Specific Elective Courses										
	24BAVDE7-11	DSE – III Theory + Practical / Theory + Tutorial	4+4 / 5+1		3	50	50	100	6		
	24BAVDE12	DSE – IV Project & Internship	6		-	100	-	100	6		

IV	Skill Enhancement Courses							
	23BVBNC6/ 23BVBNS6/ 23BVBSP6	Value Based Course Elective I – NCC / NSS / Sports	3/2	2	60	40	100	4/1/1
	Total							28/25
	Over all total							172/154

➤ **Ability Enhancement Compulsory Courses**

- English for Communication
- Environmental Studies

➤ **Skill Enhancement Courses**, are Skill Based and / or Value Based which are aimed at providing hands on training, competencies, skills etc. and may be opted by the students from the electives offered by the departments or from SWAYAM MOOCs / NPTEL

Skill Based Courses

- **Skill Based Compulsory course I – 23BSBCS1 – Communication Skill during 3rd semester**
- **Skill Based Compulsory course III - 23BSBSS1 – Soft Skill during 4th semester**
- **Skill Based Courses offered by Information Technology department**

S.No	Skill Based Elective Courses (II / IV)	Semester	Hours of Instruction	Credit/Course
1.	• 24BAVSE1- 3D Modelling & Texturing – Practical	III	4P	2
2.	• 24BAVSE2-3D Game Development- Practical	IV	4P	2

- **Value Based Courses - Elective I**

Value Based Courses Elective I	Subject Code	Semester	No of .Credits
NCC/ NSS/ Sports	23BVBNC1-6/	1-6	24 Credits
	23BVBNS1-6/		6 Credits
	23BVBSP1-6		6 Credits

- **Value Based Courses - Elective II offered by Information Technology Department**

Value Based Courses Elective II	Subject Code	Semester	Hours of Instruction	Credit / Course
-	-	-	-	-

➤ **Discipline Specific Elective Courses** should be related to their own core which may be from SWAYAM MOOCs /NPTEL also

- All the courses have 6 credits with 4 hours of theory and 4hours of practical or 5 hours of theory and 1 hour of Tutorials.

S.No.	DSE Courses	Semester	Hours of Instruction	Credits	
			Theory + Practical / Theory + Tutorial		
1.	24BAVDE1 Internet and Web Programming	V	4	4	6
	24BAVDE1P Internet and Web Programming Practical	V	4	2	
2.	24BAVDE2 Computer Graphics	V	4	4	6
	24BAVDE2P Computer Graphics Practical	V	4	2	
3.	24BAVDE3 Digital Marketing Techniques	V	5+1	6	
4.	24BAVDE4 UI Design	V	5+1	6	
5.	24BAVDE5 Animation Design	V	5+1	6	
6.	24BAVDE6 Mobile VR Development	V	4	4	6
	24BAVDE6P Mobile VR Development Practical	V	4	2	
7.	24BAVDE7 Data Security and Privacy	VI	5+1	6	
8.	24BAVDE8 Artificial Intelligence	VI	5+1	6	
9.	24BAVDE9 Introduction to Metaverse	VI	5+1	6	
10.	24BAVDE10 Design Lighting Techniques	VI	5+1	6	
11.	24BAVDE11 Data Visualization with Augmented Reality	VI	4	4	6
	24BAVDE11P Data Visualization with Augmented Reality Practical	VI	4	2	
12.	24BAVDE12 Project & Internship	VI	6	6	

➤ **Generic Elective Courses offered for other disciplines / departments**

- A Core Course offered in a Discipline / Subject may be offered as a Generic Elective for other departments.

S.No	Generic Elective Courses	Semester	Hours of Instruction	Credits
			Theory + Practical / Theory + Tutorial	
1.	24BAVGE1 Fundamentals of Multimedia	I	5+1	6
2.	24BAVGE2 Introduction to Augmented Reality	III	5+1	6
3.	24BAVGE3 Introduction to Metaverse	IV	5+1	6

Total credits to earn the degree

1. Part I components - 8 Credits (Languages)
2. Part II components -32 Credits (Ability Enhancement Compulsory Courses – 8 Credits, and Generic Elective Courses – 24 Credits)
3. Part III components - 96 Credits (Discipline Specific Core Courses – 72 Credits and Discipline Specific Elective Courses - 24 Credits)
4. Part IV Components - 36 /18 Credits (Skill Enhancement Courses - Skill Based Courses – 8 Credits, Value Based Courses Elective I (NCC/NSS/Sports) –24 / 6 / 6, Value Based Elective Courses II & III – 4 Credits)
5. Minimum One Course should be from SWAYAM MOOCs/ NPTEL.

One to 4 Courses may be from SWAYAM MOOCs/NPTEL for Credit Transfer in DSE/Generic Elective.