BON SECOURS COLLEGE FOR WOMEN (AUTONOMOUS)

Accredited with A++ Grade by NAAC in Cycle II

Affiliated to Bharathidasan University, Tiruchirappalli

UGC Recognized 2(f) and 12(B) Institution

VILAR BYPASS, THANJAVUR - 613 006, TAMIL NADU

DEPARTMENT OF PHYSICS

Programme: B.Sc Physics

STRUCTURE OF THE CURRICULUM

Distribution of Courses, Credits and Contact Hours

Sem	Part	Course Type	Course Code	Course Title	Contact Hrs.	Credits	Marks		Total Marks
							Int.	Ext.	
I	I	Language Tamil /Hindi	24UGT101/ 24UGH101	Tamil Illakkiya Varalaru-I/ Hindi-I	6	3	25	75	100
	II	English	24UGE201	General English - I	6	3	25	75	100
	III	Generic/Cluster Core – I	24UPS401	Properties of Matter and Acoustics	4	4	25	75	100
		Discipline Centric Core-I	24UPH501	Heat, Thermodynamics and Statistical Physics	4	4	25	75	100
		Core Laboratory I	24UPH551	General Physics Lab-I	4	2	40	60	100
		Allied Course I Mathematics	24UMA305	Algebra Analytical Geometry 3D and Trigonometry	4	3	25	75	100
	IV	Foundation Course	24UFO901	Value Education	2	2	25	75	100
Total					30	21	-	-	700
II	I	Language Tamil //Hindi	24UGT102/ 24UGH102	Tamil Illakkiya Varalaru – II /Hindi-II	6	3	25	75	100
	II	English	24UGE202	General English - II	6	3	25	75	100
	III	Discipline Centric Core Course II	24UPH502	**Discipline Centric Core:** Mechanics and Relativity	4	4	25	75	100
		Core Laboratory II	24UPH552	General Physics Lab-II	4	2	40	60	100
		Allied Course II	24UMA306	Applied Mathematics	4	3	25	75	100
		Allied Laboratory I	24UMA351	Calculus and Fourier Series Practice	4	2	40	60	100
			24UCH591	Field Work	-	2	40	60	100

	IV	Foundation Course	24UFC905	Environmental Studies	2	2	25	75	100
Total					30	21	-	-	800
III	I	Language Tamil / Hindi	24UGT103/ 24UGH103	Tamilaga Varalarum Panpadum /Hindi-III	6	3	25	75	100
	II	English	24UGE203	General English - III	6	3	25	75	100
	III	**Generic/Cluster Core-** II	24UPS402	Optics and Laser Physics	4	4	25	75	100
		Discipline Centric Core -III	24UPH503	Solid State Physics	4	4	25	75	100
		Core Laboratory III	24UPH553	Modern Optics Lab	4	2	40	60	100
		Allied Course III Discipline Chemistry/ Computer Science	24UCH301/ 24UCS301	General Chemistry (or) Programming in C	3	3	25	75	100
	IV	Ability Enhancement-I	24UAB361	Life Skills Management	2	2	25	75	100
	V		24UHW951	Health & Wellness	1	1	-	-	100
Total					30	22	-	-	800
IV	I	Language Tamil/Hindi	24UGT104/ 24UGH104	Tamilum Ariviyalum/ Hindi-IV	6	3	25	75	100
	II	English	24UGE204	General English - IV	6	3	25	75	100
	III	Discipline Centric Core - IV	24UPH504	Electricity, Magnetism and Electromagnetism	4	4	25	75	100
		Core Laboratory IV	24UPH554	Electricity and Magnetism Lab	4	2	40	60	100
		Allied Course IV	24UCH302/ 24UCS302	Applied Chemistry (or) Principles of Information Technology	4	3	25	75	100
		Allied Laboratory Discipline Chemistry/CS	24UCH351/ 24UCS351	Volumetric and Organic Qualitative Analysis/ Programming in CLab	4	2	40	60	100
			24UCH592	Internship	-	2	40	60	100
	IV	Ability Enhancement	24UAB371	Soft and Quantitative Skills	2	2	25	75	100
Total					30	21	-	-	800
V	III	**Generic/Cluster Core**– III	24UPS403	Analog and Communication Electronics	4	4	25	75	100
		Generic/Cluster Core-IV	24UPS404	Astrophysics	4	4	25	75	100
		Discipline Centric Core–V	24UPH505	Atomic and Molecular Physics	4	4	25	75	100

		Discipline Centric Core- VI	24UPH506	Classical and Quantum Physics	4	4	25	75	100
		Core Laboratory V	24UPH555	Analog Electronics Lab	4	2	40	60	100
		Discipline Centric Elective I	-	Choose a knowledge course from any one track	4	4	25	75	100
		Discipline Centric Elective Laboratory I	-	Choose a skill course from the selected track	4	2	40	60	100
	IV	Ability Enhancement-II	24UPH381	Technical Skills: Testing and Servicing of Electronic Components	2	2	40	60	100
Total					30	26	-	-	800
VI	III	Generic/Cluster Core - V	24UPS405	Communication Physics	4	4	25	75	100
		Discipline Centric Core-VII	24UPS507	Nuclear Physics	4	4	25	75	100
		Core Laboratory VI	24UPH556	Digital Electronics and Microprocessor Lab	4	2	40	60	100
		Generic Cluster Elective	-	Choose a generic/ cluster elective course offered by Department of Physics	4	4	25	75	100
		Discipline Centric Elective II	-	Choose a professional course from the selected track	4	4	25	75	100
			24UPH593	Project	7	5	40	60	100
		Open (Interdisciplinary) Elective I	-	Courses offered by physics Dept any other department	3	3	25	75	100
Total					30	26	-	-	700
	V			Co-curricular Activities	-	1			-
				Extra-curricular Activities	-	1			-
				Extension Activities	-	1			-
					-	3			-

TOTAL CREDITS: 21+21+22+21+26+26+3 = 140 Credits

TOTAL MARKS: 700+800+800+800+800+700 = 4600 Marks

Elective Courses Optional

Discipline Centric Elective /Practicum

Track 1- Higher Studies

- K-24UPH701:Cosmology and Astronomy
- S-24UPH751:Astrophysics Simulation Lab
- P-24UPH702:Plasma Physics

Track 2- Higher Studies

- K-24UPH703:Fundamentals of Medical Physics
- S-24UPH752:Medical Instrumentation
- P-24UPH704:Medical Imaging Technology

Track 3– Higher Studies

- K-24UPH705:Introduction to Materials Science
- S-24UPH753:Experimental Nanotechnology Lab
- P-24UPH706:Nanotechnology and Applications

Track 4– Employment

- K-24UPH707: Fundamentals of Optoelectronics
- S-24UPH754: Optoelectronics Lab
- P-24UPH708: Optoelectronics and its applications

Track 5 – Employment:

- K-24UPH709: Micro Processor and Micro Controller
- S-24UPH755: Micro Processor and Micro Controller Lab
- P-24UPH710: Computer Organization and Architecture

Track 6- Employment:

- K-24UPH711: Digital Electronics
- S-24UPH756: Digital Circuits
- P-24UPH712: Communication systems and Network Technology

Track 7– Teaching:

- K-24UGP791: Educational Psychology
- S-24UPH757: Teaching of Physics
- P-24UGL792: Teaching Learning and Assessment

Track 8- Entrepreneurship:

- K-24UPH715: Upskilling
- S-24UPH758: Incubation
- P-24UPH716: Startup

Value Added Course:

- 26UPHVA02:AI in Physics