



SEETHALAKSHMI RAMASWAMI COLLEGE

(Autonomous)

Affiliated to Bharathidasan University

Tiruchirappalli

Accredited with A+ by NAAC (4th Cycle)



B.Sc., Physics - Revised CBCS - OBE - BASED Curriculum Structure

(For Students admitted from June 2021 onwards)

SEM	PART	COURSE	COURSE CODE	COURSE TITLE	HRS	CRD	INT/EXT	CIA	SE	TOTAL
I	I	Language-I	U211XXLT01	Course-I	6	3	EXT	25	75	100
I	II	English-I	U211XXEE01	Course-I	6	3	EXT	25	75	100
I	III	Core Course-I	U211PHMT01	Properties of Matter	7	5	EXT	25	75	100
I	III	Core Practical-I	U212PHMP01	Practical-I : Properties of Matter & Heat Experiments	2	-	-	-	-	-
I	III	First Allied course-I	U211CHAT03	Offered by the Department of Chemistry	4	3	EXT	25	75	100
I	III	First Allied Practical	U212CHAP03	Practical : Offered by the Department of Chemistry	2	-	-	-	-	-

I	III	Cross Disciplinary Course (CDC) {Physics, Chemistry, Computer Science}	U212XDMP01	Radiation and Safety Management	1	-	EXT	-	-	-
I	IV	VBE	U211XXVE01	Value Based Education	2	2	EXT	25	75	100
Total Credits and Marks					30	16				500
II	I	Language-II	U212XXLT02	Course-II	6	3	EXT	25	75	100
II	II	English-II	U212XXEE02	Course-II	6	3	EXT	25	75	100
II	III	Core Course-II	U212PHMT02	Heat and Thermodynamics	5	5	EXT	25	75	100
II	III	Core Practical-I	U212PHMP01	Practical-I : Properties of Matter & Heat Experiments	2	4	INT	40	60	100
II	III	First Allied Course-II	U212CHAT06	Offered by the Department of Chemistry	4	3	EXT	25	75	100
II	III	First Allied Practical	U212CHAP03	Practical : Offered by the Department of Chemistry	2	3	INT	40	60	100
II	III	Cross Disciplinary Course (CDC) {Physics, Chemistry, Computer Science}	U212XDMP01	Radiation and Safety management	3	4	EXT	25	75	100
II	IV	EVS	U212XXES01	Environmental Studies	2	2	EXT	25	75	100

Total Credits and Marks					30	27				800
III	I	Language-III	U213XXLT03	Course-III	6	3	EXT	25	75	100
III	II	English-III	U213XXEE03	Course-III	6	3	EXT	25	75	100
III	III	Core Course-III	U213PHMT03	Mechanics and special theory of relativity	5+1	5	EXT	25	75	100
III	III	Core Practical-II	U214PHMP02	Practical-II : Electricity & Magnetism Experiments	2	-	-	-	-	-
III	III	Second Allied Course-I	U213MAAT12	Offered by the Department of Mathematics	4	3	EXT	25	75	100
III	III	Second Allied Practical		Practical : Offered by the Department of Mathematics	2	-	-	-	-	-
III	IV	NME-I*	U213PHNE01	Energy harvesting and Renewable energy resources	2	2	EXT	25	75	100
III	IV	SBE-I	U213PHSE01:1	Troubleshooting Electronic Equipment	2	2	EXT	25	75	100
Total Credits and Marks					30	18				600
*Offered by the department to the students of other disciplines										
IV	I	Language-IV	U21XXLT04	Course-IV	6	3	EXT	25	75	100
IV	II	English-IV	U214XXEE04	Course-IV	6	3	EXT	25	75	100
IV	III	Core Course-IV	U214PHMT04	Electricity and Electromagnetism	5+1	5	EXT	25	75	100

IV	III	Core Practical-II	U214PHMP02	Practical-II : Electricity & Magnetism Experiments	2	4	INT	40	60	100
IV	III	Second Allied Course-II	U214MAAT15	Offered by the Department of Mathematics	4	3	EXT	25	75	100
IV	III	Second Allied Practical		Practical : Offered by the Department of Mathematics	2	3	INT	40	60	100
IV	IV	NME-II*	U214PHNE02	Medical Physics	2	2	EXT	25	75	100
IV	IV	SBE-II	U214PHSE02:1	Electronic Communication System	2	2	EXT	25	75	100
Total Credits and Marks					30	25				800
*Offered by the department to the students of other disciplines										
V	III	Core Course-V		Optics, Lasers and Fiber optics	5	5	EXT	25	75	100
V	III	Core Course-VI		Atomic Physics and Spectroscopy	5	5	EXT	25	75	100
V	III	Core Course-VII		Solid State Physics	5	5	EXT	25	75	100
V	III	Core Practical-III		Practical-III : General & Basic Electronics Experiments	3+3	4	INT	40	60	100
V	IV	MBE-I		Basic Electronics	5	4	EXT	25	75	100
V	IV	SBE-III		C Programming in Physics	2	2	EXT	25	75	100
V	IV	SSD		Soft Skill Development	2	2	INT	25	75	100
Total Credits and Marks					30	27				700
VI	III	Core Course-VIII		Basic Quantum Mechanics	5	5	EXT	25	75	100

VI	III	Core Course-IX		Nuclear Physics	5	5	EXT	25	75	100
VI	III	Core Practical-IV		Practical-IV : General & Digital Electronics Experiments	3+3	4	INT	40	60	100
VI	IV	MBE-II		Digital Electronics	5	4	EXT	25	75	100
VI	IV	MBE-III		Microprocessor 8085 and its applications	5	4	EXT	25	75	100
VI	III	Project		Group Project	3	3	EXT	20	80	100
VI	V	GS		Gender Studies	1	1	INT	25	75	100
VI	V	Extension		Extension Activities, NSS, NCC, YRC, SPORTS	-	1	INT	-	-	100
Total Credits and Marks					30	27				800
Total Credits and Marks					180	140				4200

TOTAL DISTRIBUTION OF HOURS, CREDITS & MARKS FOR UG PROGRAMME

SEMESTER	HOURS	CREDITS	TOTAL MARKS
I	30	16	500
II	30	27	800
III	30	18	600
IV	30	25	800
V	30	27	700
VI	30	27	800
TOTAL	180	140	4200

NME OFFERED BY THE DEPARTMENT TO OTHER DEPARTMENT STUDENTS

SEM	PART	COURSE	COURSE CODE	COURSE TITLE	HRS	CRD	EXT/INT	CIA	SE	TOTAL
III	IV	NME-I	U213PHNE01	Energy harvesting and Renewable energy resources	2	2	EXT	25	75	100
IV	IV	NME-II	U214PHNE02	Medical Physics	2	2	EXT	25	75	100

Allied Offered by the Department to other Department Students-Chemistry and Mathematics

SEM	PART	COURSE		COURSE TITLE	HRS	CRD	EXT/ INT	CIA	SE	TOTAL
I	III	First Allied Course -I	U21PHAT01	Foundation Physics-I	4	3	EXT	25	75	100
II	III	First Allied Course -II	U212PHAT03	Foundation Physics-II	4	3	EXT	25	75	100
II	III	First Allied Practical		Practical: Foundation Physics Experiments	2	3	INT	40	60	100

Allied Offered by the Department to other Department Students-Computer Science

SEM	PART	COURSE		COURSE TITLE	HRS	CRD	EXT/ INT	CIA	SE	TOTAL
I	III	First Allied Course -I	U211PHAT02	Applied Physics-I	4	3	EXT	25	75	100
II	III	First Allied Course -II	U211PHAT02	Applied Physics-II	4	3	EXT	25	75	100
II	III	First Allied Practical		Practical: Applied Physics Experiments	2	3	INT	40	60	100

OPTIONAL COURSES

SEM	PART	COURSE	SUBJECT TITLE	CRD	EXT / INT	CIA	SE	TOTAL
III	IV	SBE-I	Troubleshooting Electronic Equipment / Weather forecasting	2	EXT	25	75	100
IV	IV	SBE-II	Electronic Communication System / Acoustics	2	EXT	25	75	100
V	IV	SBE-III	C Programming in Physics / Bio Physics	2	EXT	25	75	100
V	IV	MBE-I	Basic Electronics / Mathematical Physics	4	EXT	25	75	100
VI	IV	MBE-II	Digital Electronics / Embedded System	4	EXT	25	75	100
VI	IV	MBE-III	Microprocessor 8085 and its applications / Statistical Physics	4	EXT	25	75	100

PART	DETAILS	NO. OF COURSES	CREDIT/COURSE	TOTAL CREDIT
I	Language	4	3	12
II	English	4	3	12
III	Core Courses	9	5	45
	Core Practical	4	4	16
	Allied Course	4	3	12
	Allied Practical	2	3	6
	MBE	3	4	12
	Group Project	1	3	3
	CDC	1	4	4
IV	SBE	3	2	6
	NME	2	2	4
	EVS	1	2	2
	VBE	1	2	2
	Soft Skill	1	2	2
V	GENDER	1	1	1
	EXTENSION	1	1	1
TOTAL CREDITS				140

BEYOND CURRICULUM

SEM	COURSE	COURSE CODE	SUBJECT TITLE
II	CC I	21UPHIICC3:1	Astrophysics
IV	CC II	21UPHIVCC3:2	Home Appliances and electrical safety
VI	CC III	21UPHVICC3:3	Laptop Servicing

SEM	COURSE	COURSE CODE	SUBJECT TITLE
I	VAC I	21UPHIVAC3:1	Remote Sensing
III	VAC II	21UPHIIIIVAC3:2	Non-Destructive Testing
V	VAC III	21UPHVVAC3:3	Physics for Competitive Exams