



# NEHRU ARTS AND SCIENCE COLLEGE

(Autonomous)

Reaccredited by NAAC with 'A' Grade, Certified by ISO 9001:2008 & 14001:2004

Recognized by UGC & Affiliated to Bharathiar University

Nehru Gardens, Coimbatore-641 105

**B. Sc., PHYSICS**

## Scheme of Examination (IV Semester Language)

(Applicable to the students admitted during the year 2018-2019)

Semester	Part	Course Code	Name of the Course	Instruction hours / week	Duration of Examination	Examination Marks			Credits	
						CIA	ESE	Total		
I	I	18U1TAM101/ 18U1HIN101 / 18U1MAL101/ 18U1FRN101	Language I	5	3	25	75	100	4	
	II	18U2ENG101	English I	5	3	25	75	100	4	
	III		18U3PHC101	Core Paper I Mechanics, Properties of Matter And Sound	7	3	25	75	100	4
			18U3MPA101	Allied Paper I Mathematics-I	7	3	25	75	100	4
			18U3PHP203	Core Paper III Physics Practical-I	3	-	-	-	-	-
	IV		18U4ENV101	Ability Enhancement Compulsory Course - Environmental Studies	2	3	-	50	50	2
			18U4HVY101	Human Values and Yoga Practice I	1	-	-	-	-	-
				30				450	18	
II	I	18U1TAM202/ 18U1HIN202/ 18U1MAL202/ 18U1FRN202	Language II	5	3	25	75	100	4	
	II	18U2ENG202	English II	5	3	25	75	100	4	
	III		18U3PHC202	Core Paper II Heat and Thermodynamics	7	3	25	75	100	4
			18U3MPA202	Allied Paper II Mathematics-II	7	3	25	75	100	4
			18U3PHP203	Core Paper III Physics Practical-I	3	3	40	60	100	4
	IV		18U4HRC202	Ability Enhancement Compulsory Course - Human Rights and Constitution of India	2	3	-	50	50	2
			18U4HVY202	Human Values and Yoga Practice I	1	2	25	25	50	2
				30				600	24	



			II						
		18U4XXVALC	**Skill Enhancement Add on course - Institute Industry Linkage	-	-	-	-	-	Grade
				30				700	28
V	III	18U3PHC507	Core Paper VII Classical Mechanics and Mathematical Physics	4	3	25	75	100	4
		18U3PHC508	Core Paper VIII Atomic Physics and Spectroscopy	4	3	20	55	75	3
		18U3PHC509	Core Paper IX Electronics	4	3	20	55	75	3
		18U3PHC510	Core Paper X Nuclear Physics	4	3	25	75	100	4
		18U3PHE501/ 18U3PHE 502/ 18U3PHE 503	Elective Paper-I	4	3	25	75	100	4
		18U3PHP613	Core Paper XIII Physics Practical-III	3	-	-	-	-	-
		18U3PHP614	Core Paper XIV Digital Electronics and Microprocessor Practical	2	-	-	-	-	-
	18U3PHP615	Core Paper XV Computer Programming Practical	2	-	-	-	-	-	
	IV	18U4PHS503	Skill Based Paper III Digital Electronics	3	3	20	55	75	3
				30				525	21
VI	III	18U3PHC611	Core Paper XI Quantum Mechanics and Relativity	5	3	25	75	100	4
		18U3PHC612	Core Paper XII Solid State Physics	5	3	25	75	100	4
		18U3PHP613	Core Paper XIII Physics Practical-III	3	3	40	60	100	4
		18U3PHP614	Core Paper XIV Digital Electronics and Microprocessor Practical	3	3	30	45	75	3
		18U3PHP615	Core Paper XV Computer Programming	3	3	30	45	75	3
		18U3PHE604/ 18U3PHE605/ 18U3PHE606	Elective Paper-II	4	3	25	75	100	4
		18U3PHE607/ 18U3PHE608/ 18U3PHE609	Elective Paper-III	4	3	25	75	100	4
	IV	18U4PHS604	Skill Based Paper IV Microprocessors	3	3	20	55	75	3
	V	18U5PH6EXT	Extension Activity	-	-	50	-	50	2

				30				775	31
Total								3600	144

# **Basic Tamil** -Students who have not studied Tamil upto 12th standard.

##**Advance Tamil** – Students who have studied Tamil language upto 12th standard and chosen other languages under part I of the programme but would like to advance their Tamil language skills.

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\* **NME** – Student shall choose any one course out of three courses.

@ No End Semester Examinations. Only Continuous Internal Assessment (CIA)

### List of Discipline Specific Elective Papers (Choose any one of the Paper)

Elective-I	Course Code	Group	Name of the Course
Elective Paper– I	17U3PHE501	A	Material Science
	17U3PHE502	B	Energy Physics
	17U3PHE503	C	Agricultural Physics
Elective Paper – II	17U3PHE604	A	Fundamentals of Nano Science
	17U3PHE605	B	Optical Fibres and Fibre Optic Communication Systems
	17U3PHE606	C	Bio-Physics
Elective Paper - III	17U3PHE607	D	Semiconductor Devices
	17U3PHE608	E	Space Physics
	17U3PHE609	F	Geophysics

### Extra Departmental Courses offered by Physics Department to other Department Students

S.No.	Semester	Course Code	Name of the Course
1	III	18U4PH4ED1	Everyday Physics I
2	III	18U4PH4ED2	Everyday Physics II

### Additional Credit Course

Earning Additional credit course is not mandatory for Course Completion

Additional credits: 8

S. No.	Course	Credit/ Course	Total Credits
1	Completion of Certificate Course	1	1
2	Hindi/ other Foreign languages	1	1
3	Self Study Papers	1	2
4	MOOC Courses/Spoken Tutorial prescribed by the Departments	1	3
5	Representation - Sports/Social Activities/ Co curricular/Extracurricular Activities at University/ District/ State/ National/ International levels	1	1
<b>Total</b>			<b>8</b>

**Rules:** The Students can earn additional credits only if they complete the above during the course period (II to V Sem) and based on the following criteria. Proof of Completion must be submitted to the Office of Controller of Examinations before the commencement of the VI Semester. (Earning Additional credit course is not mandatory for Course Completion)

1. Students can complete Certification Courses for a minimum of 30hrs (II to V Sem only) from reputed centres and the same certificate shall be produced to earn a credit. They shall be guided by the Department if needed.
2. Students can opt Hindi/ any Foreign Language approved by Certified Institutions to earn one credit. The certificate of Hindi must be obtained from Dakshin Bharat Hindi Prachar Sabha and He/ She has to enroll and complete during their course period (II to V Sem only)
3. Students can earn one credit, if they complete one self study Paper prescribed by the Department. The Departments shall offer two Self Study Papers.

#### **Self Study Paper offered by Physics Department**

<b>S. No.</b>	<b>Semester</b>	<b>Course code</b>	<b>Course Title</b>
1	Semester II to IV	18UPHSS01	Energy Physics
2		18UPHSS02	Basic Electronics

4. Students can earn one Credit, if they complete any one MOOC courses/ Spoken Tutorial prescribed by the Department. Students shall earn a maximum of 3 Additional Credits by completing 3 online courses.

#### **List of Online Courses prescribed by Physics Department**

1. Exp EYES
2. Scilab
3. Avogadro
4. Biogas Plant
5. OpenFOAM

**Note:** Other than the above mentioned courses, any course from recognized websites with the consent of the Head of the Department will also be accepted.

5. Award Winners in Sports/Social Activities/ Co curricular/ Extra Curricular Activities at University/ District/ State/ National/ International levels can earn One Extra Credit by producing the Certificate.

**Chairman  
Board of Studies in Physics  
Nehru Arts and Science College  
Coimbatore**

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Nehru Gardens, T.M.Palayam, Coimbatore-641 105**

**DEPARTMENT OF PHYSICS**

**B.Sc. MATHEMATICS - COMPUTER APPLICATION**

**SYLLABUS**



**EFFECTIVE FROM 2017-18**