

Department of Physics
Minutes of Meeting of Board of Studies in Physics (UG)
09 – 01 - 2020

A Meeting of the Board of studies in Physics (UG) was held on 9-1-2020 at 11-30 am in the Board Room. The following members were present for the meeting.

Chairman: Dr. A. Albert Irudayaraj

Members:

- Mr. C. Tirupathi
- Mr. D. Daniel Lawrence
- Mr. M. Aravinthraj
- Miss. S. Kalaiarasi
- Mr. R. Ramesh
- Mr. D. Rajkumar
- Dr. A. Dhayal Raj
- Mr. N. Madhavan
- Dr. M. Jose
- Dr. S. A. Martin Britto Dhas
- Rev. Dr. G. Theophil Anand
- Mr. G. Jayakumar
- Mr. D. Magimai Antoni Raj
- Mr. L. Anandaraj
- Dr. S. John Sundaram

University Nominee: Dr. F. Liakath Ali Khan,
Associate Professor of Physics,
Controller of Examination,
Islamiah college, Vaniyambadi

Subject Expert: Dr. S. Pauline
Associate Professor,
Department of Physics,
Loyola college, Chennai.

Alumnus: Dr. R. Robert,
Assistant Professor,
Department of Physics,
Government Arts college, Krishnagiri.

Student representatives:

- N. Neethiarasi
III B.Sc. Physics (Shift – I)
- C. Vibin Chandra Paul
III B.Sc. Physics (Shift – II)

Following members expressed their inability to attend the meeting.

1. Rev. Dr. P. Gandhi Kallarasan
2. Mr. Gerard Benedict(Industrialist)
Manager HR hakuna matata, Velachery, Chennai-42.

Agenda:

1. To consider the Programme structure and the syllabi of courses/papers in B.Sc. Physics (Main) curriculum, Non-Major Elective courses and the Allied Physics courses for the students admitted during 2017-18 and thereafter.
2. To discuss and pass the programme structure for B.Sc. Physics, for students to be admitted during the year 2021–2022 and thereafter.

Resolution:

1. Considered the Programme structure and the syllabi of courses/papers in B.Sc. Physics (Main) curriculum, Non-Major Elective courses and the Allied Physics courses for the students admitted during the year 2017-18 and thereafter.

It was resolved to adopt the existing syllabi of courses/papers in B.Sc., Physics (Main), Non-Major Elective courses and the Allied Physics courses for the students admitted during the year 2017-18 and thereafter.

2. Considered the programme structure for B.Sc., Physics, for students to be admitted during the year 2021–2022 and thereafter.

After due deliberations and detailed discussion, it was decided to adopt the following programme structure under choice based credit system for the B.Sc. Physics students to be admitted during the academic year 2021-2022 and thereafter.

Department of Physics, Sacred Heart College, Tirupattur
B. Sc. Physics [CBCS Pattern]
Programme structure (To be followed from 2021–22 onwards)

Semester	Paper	Title of the Paper	Hours/ Week	Credits	Marks	
					CA	SEM
I	Main Core	Mechanics	3	4	30	70
	Main Core	Properties of matter	3	4	30	70
	Allied	Allied Mathematics - I	6	4	30	70
	Main Core Practicals	Physics Main Practicals – I	4	2	40	60
	Language	Tamil	5	3		
	Language	General English	5	3		
		Communicative English	-	1		
	Life Education	Personal Skills	2	1		
		Christian Religion–1 / Value Education-1	2	1		
TOTAL			30	23		

Semester	Paper	Title of the Paper	Hours/Week	Credits	Marks	
					CA	SEM
II	Main Core	Heat and Thermodynamics	3	4	30	70
	Main Core	Waves and Oscillations	3	4	30	70
	Main Core Practicals	Physics Main Practicals – I	4	2	40	60
	Allied	Allied Mathematics – II	6	4	30	70
	Language	Tamil	5	3		
	Language	General English	5	3		
		Communicative English		1		
	Life Education	Social Skills	2	1		
Christian Religion-2/Value Education-2		2	1			
TOTAL			30	23		

Semester	Paper	Title of the Paper	Hours/Week	Credits	Marks	
					CA	SEM
III	Main Core	Electricity and Magnetism	3	4	30	70
	Main Core	Optics	3	4	30	70
	Main Core Practicals	Physics Main Practicals – II	4	2	40	60
	Allied	Allied Chemistry -I	6	4	30	70
	Language	Tamil	5	3		
	Language	General English	5	3		
	Life Education	Employability Skills –1	2	1		
		Environmental Science	2	1		
	Extra credit Course	1. Special Project- I 2. NPTEL online courses	-	2 [#]		100
TOTAL			30	22+2[#]		

Semester	Paper	Title of the Paper	Hours/ Week	Credits	Marks	
					CA	SEM
IV	Main Core	Modern Physics	3	4	30	70
	Main Core	Electromagnetism	3	4	30	70
	Main Core Practicals	Physics Main Practicals – II	4	2	40	60
	Allied	Allied Chemistry –II	6	4	30	70
	Language	Tamil	5	3		
	Language	General English	5	3		
	Life Education	Employability Skills –2	2	1		
		Human Rights	2	1		
	Extra credit Course	1. Special Project II (Repair and Maintenance of Lab Equipments) 2. Internship	-	2 [#]		100
	Extension	DEEDS	-	2		
SHELTERS		-	2			
TOTAL			30	26+2[#]		

Semester	Paper	Title of the Paper	Hours/ Week	Credits	Marks	
					CA	SEM
V	Main Core	Classical mechanics and Statistical physics	4	4	30	70
	Main Core	Semiconductor devices and their applications	4	4	30	70
	Main Core	Solid State Physics	4	4	30	70
	Main Core	Mathematical Physics	4	4	30	70
	Main Core	Physics Main Practicals – III (General experiments)	3	3	40	60
	Main Core	Physics Main Practicals – IV (Electronic experiments)	3	3	40	60
	Subject Elective	1. Nanomaterials and their applications 2. Electronic communication systems 3. Renewable Energy and Energy Harvesting	3	2	30	70
	Subject Elective	1. Programming in C 2. 8085 Microprocessor and its applications 3. Medical Physics	3	2	30	70
	Self Study Paper	1. Astrophysics 2. Laser Physics and Fiber Optics 3. History of Physics 4. Science a technology	-	1*	-	100
	Non Major Elective	Offered by other departments	2	1	30	70
TOTAL			30	27+1*		

Semester	Paper	Title of the Paper	Hours/Week	Credits	Marks	
					CA	SEM
VI	Main Core	Applied Electronics	5	5	30	70
	Main Core	Nuclear and Particle Physics	5	5	30	70
	Main Core	Quantum Mechanics and Relativity	4	4	30	70
	Main Core	Physics Main Practicals – III (General experiments)	2	2	40	60
	Main Core	Physics Main Practicals – IV (Electronic experiments)	2	2	40	60
	Subject skill	Electrical circuits and Networks	5	4	40	60
	Subject skill	Basic Instrumentation	5	4	40	60
	Self Study Paper	Physics Revisited	–	1*	-	100
	Non Major Elective	Offered by other departments	2	1	30	70
Total			30	27+1*		

Semester	Paper	Title of the Paper	Hours/Week	Credits	Marks	
					CA	SEM
V	Non Major Elective	Repair and maintenance of household appliances (offered to other department students)	2	1	30	70
VI	Non Major Elective	Physics in everyday life	2	1	30	70

SEMESTER	I	II	III	IV	V	VI	TOTAL
HOURS	30	30	30	30	30	30	180
CREDITS	23	23	22+2 [#]	26+2 [#]	27+1*	27+1*	148+4 [#] +2*

Following suggestions were given by the members which will be considered during the next revision.

Dr. Pauline suggested that the Atomic Physics and Nuclear Physics papers may be combined as most of the Atomic Physics topics are being covered in high school level itself.

Dr. Liakath Ali Khan suggested that sub-divisions may be introduced in the questions to avoid repetition rather than combining the papers.

Dr. Pauline suggested the introduction of problems as internal component.

Dr. Robert suggested that objective type questions may be introduced in part A of semester question paper (if possible) or at least as an internal component.

Dr. Liakath Ali Khan suggested that problems may be asked as sub-divisions in essay questions also.

Dr. Pauline suggested that the Optics and Molecular Spectroscopy papers may be combined as Optics paper cannot be handled in 3 hours. She also suggested that Optics-I and Optics-II can be given wherein, Optics-I may contain topics related to Geometrical Optics and Spectroscopy whereas Optics-II may contain topics related to Physical Optics.

Dr. Pauline suggested that the question papers may be set for a maximum of 100 marks and then, the obtained marks may be converted to 70 marks.

Dr. Liakath Ali Khan suggested that the content of the 3 hours papers may be reduced to some extent.

Dr. Pauline suggested that in Atomic Physics, the topics related to Mass Spectroscopy can be introduced.

Dr. Liakath Ali Khan and Dr. Pauline suggested that Electromagnetism paper may be shifted to semester IV.

Dr. Pauline suggested that Computational Physics may be included in Practicals.

Dr. A. Albert Irudayaraj
Chairman

Dr. F. Liakath Ali Khan,
University Nominée

Dr. S. Pauline
Subject Expert

Dr. R. Robert
Alumnus

Mr. C. Tirupathi

Mr. D. Daniel Lawrence

Albert

Dr. A. ALBERT IRUDAYARAJ
Associate Professor & Head
PG & Research Department of Physics
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Pauline

Dr. S. PAULINE
Research Supervisor
Department of Physics
Loyola College (Autonomous)
Chennai - 600 034.

Liakath Ali Khan

Dr. F. LIAKATH ALI KHAN
Associate Professor & Controller of Examinations
PG & Research Department of Physics
ISLAMIAH COLLEGE (Autonomous)
Vaniyambadi - 635 752

Robert

DR. R. ROBERT
Asst. Professor of Physics
Govt. Arts College (M)
KRISHNAGIRI - 635 001

Tirupathi

Lawrence

Mr. M. Aravinthraj

Miss. S. Kalaiarasi

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Dr. S. John Sundaram

N. Neethiarasi

C. Vibin Chandra Paul

Department of Physics

Minutes of the Meeting of Board of Studies in Physics (UG) held on 27-8-2019

A Meeting of the Board of studies in Physics (UG) was held on 27-8-2019 at 6.00 pm in the Physics Lab. The following members were present for the meeting.

Chairman: Dr. A. Albert Irudayaraj

Members:

Mr. C. Tirupathi
Mr. D. Daniel Lawrence
Mr. M. Aravinthraj
Miss. S. Kalaiarasi
Mr. R. Ramesh
Mr. D. Rajkumar
Dr. A. Dhayal Raj
Mr. N. Madhavan
Dr. M. Jose
Dr. S. A. Martin Britto Dhas
Mr. G. Jayakumar
Mr. D. Magimai Antoni Raj
Mr. L. Anandaraj

Students Representative:

Mr. M. Calvin Prakash Raj, III B. Sc. Physics

The following members expressed their inability to attend the meeting.

1. Rev. Dr. G. Theophil Anand
2. Dr. S. John Sundaram
3. Rev. Dr. Gandhi Kallarasan

Agenda

1. To consider the Programme structure and the syllabi of courses/papers in B.Sc. Physics (Main) curriculum, Non Major Elective courses and the Allied Physics courses for the students admitted during 2017-18 and thereafter.

2. To consider the evaluation procedure to be adopted for the B.Sc. Physics Main Practicals and the Allied Physics Practicals, from the academic year 2019-20 onwards, for the students admitted during 2017-18 and thereafter.
3. To consider the books for study and books for reference to be adopted for the Optics course (III semester), from the academic year 2019-20 onwards, for the B.Sc. Physics Main students admitted during 2017-18 and thereafter.

Resolutions:

1. Considered the Programme structure and the syllabi of courses/papers in B.Sc. Physics (Main) curriculum, Non Major Elective courses and the Allied Physics courses for the students admitted during the year 2017-18 and thereafter.

It was resolved to adopt the existing syllabi of courses/papers in B.Sc. Physics (Main) curriculum, Non Major Elective courses and the Allied Physics courses for the students admitted during the year 2017-18 and thereafter.

2. Considered the evaluation procedure to be adopted for the B.Sc. Physics Main Practicals, and the Allied Physics Practicals, from the academic year 2019-20 onwards, for the students admitted during 2017-18 and thereafter.

It was resolved to adopt the following evaluation procedure for the B.Sc. Physics Main Practicals and the Allied Physics Practicals, from the academic year 2019-20 onwards, for the students admitted during 2017-18 and thereafter.

Evaluation pattern for Physics Main Practical and Allied Physics Practical Examinations:

Components	Marks
CA	40
Year End Practical Examination	60
Total	100

CA components for Physics Main Practical and Allied Physics Practical Examinations:

Components	Marks
Lab Performance	25
2 CA tests	15
Total	40

For CA, the maximum mark is 40. There shall be no passing minimum for CA. Improvement of CA will not be permitted.

Components for the Year End Physics Main Practical and Allied Physics Practical Examinations:

Components	Marks
Year End Practical Examination	50
Record	10
Total	60

There shall be a Practical examination at the end of every academic year (i.e. at the end of even semester of every academic year). 75% attendance is necessary for the students to appear for the Year End Physics Main Practical and Allied Physics Practical Examinations. The course teacher (for practicals) and an external examiner (selected from the panel of examiners suggested by the Board of studies) will be the examiners for the Year End Practical Examination. The answer papers will be evaluated jointly by both the examiners for 50 marks. The records will be evaluated jointly by both the examiners for 10 marks. The maximum marks for the Year End Physics Main Practical and Allied Physics Practical Examinations will be $50 + 10 = 60$ Marks.

3. Considered the books for study and books for reference to be adopted for the Optics course (P313, III semester), from the academic year 2019-20 onwards, for the B.Sc. Physics students admitted during 2017-18 and thereafter.

It was resolved to introduce the following books for study and books for reference for the Optics course (P313, III semester), from the academic year 2019-20 onwards, for the B.Sc. Physics students admitted during 2017-18 and thereafter.

Books for study

1. R. Murugesan, Optics and Spectroscopy, S. Chand & Company Ltd., New Delhi, 2003.
2. Brij Lal, M. N. Avadhanulu, N. Subramanyam, A Text Book Of Optics, S. Chand & Company Ltd., New Delhi, 2015.
3. B. Gupta, Modern Optics, Books & Allied (P) Ltd., Kolkatta, 2012.
4. Satyaprakash, Optics, Pragati Prakashan, New Delhi, 2017.


Books for reference


1. Francis A. Jenkins, Harvey E. White, Fundamentals of Optics, Tata Mc Graw Hill, New Delhi, 2011.


2. S. L. Kakani, K. C. Bhandari, A Text book of Optics, Sultan Chand & Sons, New Delhi, 2002.
3. Anchal Srivastava, R. K. Shukla, T. P. Pandya, Introduction to Optics, New Age International Publishers, New Delhi, 2011.
4. C. L. Arora, Optics, S. Chand & Company Ltd., New Delhi, 1999.


Suggestions:


The Course teacher of Optics (P313, III Semester) suggested that few more additional topics may be included in the Unit IV (Polarization) of optics syllabus. This suggestion will be considered during the next revision of the syllabus.


Dr. A. Albert Irudayaraj 
Chairman

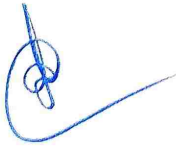
Mr. C. Tirupathi 


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