

Minutes of Board of Studies in Physics held on
09.02.2019 at 10.00 AM in the Department of Physics.

Members Present :

- | | |
|-----------------------------|--------------------------|
| 1. Dr. D. Praveen Anand | - CHAIRMAN |
| 2. Dr. S. PAUL RAJ | - MEMBER |
| 3. Rev. Dr. DANIS PONNIAH | - " |
| 4. Dr. V. SIVASHANKAR | - " |
| 5. Dr. G. DAVID RATHINAVELU | - " |
| 6. Dr. B. HELINA | - " |
| 7. Dr. R. MARY JENILA | - " |
| 8. Dr. S. ANNA VENUS | - " |
| 9. Dr. S.G. RESITH | - " |
| 10. Dr. M. AUGUSTINE | - " |
| 11. Dr. L. ARUN JOSE | - " |
| 12. Dr. P. MURUGAKOOTHAN | - UNIVERSITY NOMINEE |
| 13. Dr. R. RAMESH BABU | - EXTERNAL EXPERT |
| 14. Dr. G. RAVI | - " |
| 15. Dr. A. JESTIN LENUX | - ALUMINUS |
| 16. Ms. K. MAHALAKSHMI | - STUDENT REPRESENTATIVE |
| 17. Ms. S. SHRI JANANI | - " |

The board approved the minutes of the previous meetings held on 10.2.2018 and 10.10.2018.

The board suggest to remove few topics like "magnetic Spectrograph and line and continuous spectrum" in unit III and "neutron detection and neutron collimator" in unit IV of "Nuclear Physics" and recommends to modify the syllabus of "Reactor Physics" based on the representation from UG Students.

The board recommends to reduce the contents of Unit I of "Electromagnetic Theory and Plasma Physics" and "Communication Physics" as per the representation from PG Students. It is also suggested to realign the syllabus of "Electromagnetic Theory and Plasma Physics" paper from unit II to unit V for continuity.

The board suggest to rearrange the topics of all the units of Condensed Matter Physics according to their properties and also recommends to add two more experiments in practical II and IV.

The board suggest to change the contents of unit-IV and unit-V of the PhD Course Study paper titled "Research Methodology" and recommends to rename unit-IV as "characterization techniques".

The board approves to introduce five new PhD course study papers, namely,

- (i) Crystal growth methods.
- (ii) Thin film techniques
- (iii) Space Physics
- (iv) Nanomaterials and
- (v) Nonlinear dynamics.

Signature:

1. I. Prasad
2. 
3. ABSENT
4. 
5. 
6. B. Helina
7. 
8. 
9. S. C. Prasad
10. 
11. 
12. ABSENT
13. 
14. ABSENT 09/02/2019.
15. ABSENT
16. K. Mahalakshmi.
17. S. Shri Janani

Minutes of Board of Studies in Physics held on
08.02.2020 at 10:00 AM in the Department of Physics

Members Present:

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|-------------------------------|-----------------------------|
| 1. Dr. D. PREM ANAND | — CHAIR MAN |
| 2. Dr. S. PAULRAJ | — MEMBER |
| 3. Dr. V. SIVASHANKAR | — " |
| 4. Dr. G. DAVID RATHINAVELU | — " |
| 5. Dr. B. HELINA | — " |
| 6. Dr. S. ANNA VENUS | — " |
| 7. Dr. R. MARY JEMLA | — " |
| 8. Dr. S.G. REDITH | — " |
| 9. Dr. M. AUGUSTINE | — " |
| 10. Dr. L. ARUN JOSE | — " |
| 11. Dr. M. MELVIN DAVID KUMAR | — " |
| 12. Dr. P. MURUGA KOTHAN | — UNIVERSITY NOMINEE |
| 13. Dr. R. RAMESH BABU | — EXTERNAL EXPERT |
| 14. Dr. G. RAVI | — " |
| 15. Dr. A. JESTIN LENUS | — ALUMINUS |
| 16. Mr. K. PAVAN VINAY | — PG STUDENT REPRESENTATIVE |

The board approved the minutes of the previous meeting held on 09.02.2019.

In the Heat and Thermodynamics and Electricity and Magnetism practical papers the board suggest to add two more experiments. Also, the board approves to change the title of the Ph paper "Microprocessor and Microcontrollers" to "Microprocessors and Microcontroller".

The board propose some major changes/revamps to be done in the UG paper titled "Optics and Lasers" and in some PG papers titled "Electromagnetic Theory, ^{and Plasma Physics} Condensed Matter Physics, Material Synthesis and Characterization, Nanoscience and Technology". This can be carried out after the deliberation in the next Board of Studies meeting. Also it is suggested to give

titles to every unit in all the major and Allied physics papers after presenting them in the next Board.

The board approves to introduce three certificate courses in the VA syllabi from the next academic year (2020-2021) titled

- (i) Experimental Physics
- (ii) Neutrino Physics and
- (iii) BioPhysics

Two certificate courses in the PA syllabi from the next academic year (2020-2021), titled

- (1) Experimental techniques and
- (2) Quantum Computing

The board identified two external experts for the next board of studies meeting, namely

- (1) Dr. Sundarakannan, Associate Professor and Head Department of Physics, MS University, Tirunelveli
- (2) Dr. N. Prithvi Kumar, Associate Professor and Head, Department of Physics, Vassar College, Vondhavanagar

One Alumnus,

- (i) Dr. H. Johnson, Associate Professor, Dept of Physics, Pope's College, Saivayapuram
- and an Industrial expert,

- (i) Dr. P. Pandaram, Scientist C, Kudankulam Nuclear Power plant, Kudankulam.

Signature:

1. P. Prasad
2. SL
3. V. Jithu
4. J. D. Jithu
5. - ABSENT -
6. S. Amal Kumar
7.
8. SA. S. S. S.

9. SL
10. SL
11. SL
12.
13.
14.
15.
16. P. Pandaram
17. S. S. S.

2020-2021

(UG Syllabus revision)

Minutes of the Board of Studies in Physics held on
06.02.2021 at 10.00 AM in the Department of Physics.

Members present:

- | | |
|-----------------------------|-----------------------------|
| 1. Dr. D. Prem Anand | - CHAIRMAN |
| 2. Dr. S. Paulraj | - MEMBER |
| 3. Dr. V. Sivashankar | - " |
| 4. Dr. G. David Rathinavelu | - " |
| 5. Dr. B. Helina | - " |
| 6. Dr. S. Anna Venus | - " |
| 7. Dr. G. Ravi | - EXTERNAL EXPERT |
| 8. Dr. P. Selvarajan | - EXTERNAL EXPERT |
| 9. Dr. R. Ramesh | - EXTERNAL EXPERT |
| 10. Manoj M. Rajesh | - UG STUDENT REPRESENTATIVE |

The board approved the minutes of the previous meeting held on 08.02.2020.

It is resolved that the senior faculty member must be the chairman of the Board of Studies. The board suggested the following changes in the B.Sc Physics Syllabus.

In the paper titled "Properties of matter & Acoustics" can be changed to Properties of Matter and Sound. In unit II & III some topics can be added in unit II & III and in unit-V, the typing error can be corrected.

In the 4th unit of Introduction to Solar energy paper. "Photo voltaic effect" topic can be added and also the syllabus can be rearranged into 3 units.

In the Heat & Thermodynamics paper. In unit-III Zeroth law, In unit IV - methods and In unit-V Comparison of three Statistics can be added.

In "Nuclear Energy & Applications" paper the syllabus can be rearranged into 3 units.

The board approves that, the Professional English can be introduced instead of "Space Science & Cosmology" as per the guidelines of TANSOHE.

In the "Physics for Competitive Exams" Papers the topics in the units can be reduced.

In the paper titled "Mechanics", the topic "Venturimeter" can be included in Unit-III.

In the paper titled "Every day Electronics" the title can be changed to "Electronics in Daily life".

In the paper "Programming in C & C++" some topics can be added in Unit-V.

In the paper "Electronics-I", the Schottky diode can be added in Unit-II.

For the paper "Fibre Optics", "Focal effect" topic can be added.

In the paper "Quantum mechanics", In Unit-I, the repetition of G.P. Thomson effect can be deleted and the "The Compton effect" can be added.

In Unit-III of Electronics-II, the typical error can be corrected.

In "Solid State Physics" Paper, "Semiconducting materials" can be added in Unit-III and "Superconducting materials" can be added in Unit-V.

In the paper titled "Instrumentation" the Unit-5 can be revamped.

Regarding the paper titled "Reactor Physics" the board suggested the Scientist from Koodankulam Nuclear Power Project can be participated in the Board of Studies meeting.

The Board also approves that "Fusion & Fusion reactor" topics to be added in Unit-IV.

In "Nano Physics" paper, "Dynamic Light Scattering (DLS)" can be included. In Unit-I, the title can be changed into "Introduction and the whole topics" in Unit-I can be revamped. The Board also suggested that, the title can be changed into "Methods of Preparation" for Unit-II.

In this paper "Allied Physics-I" the topic "Conventional energy Sources" can be changed into "Energy resources".

In this paper titled "Allied Physics-I", the typical error can be corrected.

In Unit-5, Galilean transformation "can be deleted and "In "Variation of mass with velocity" topic Explanation only can be mentioned.

As suggested by the previous Board of Studies meeting, LCR Series, Parallel resonance circuits can be added in the "Electricity and Magnetism" Practicals.

Signatures:

1. D. Prem Anand
2. S. R. Mary Jenila
3. V. S. G. Rajitha
4. J. S. G. Rajitha
5. B. Helena
6. S. Aravind Kumar
7. S. R. Christhu Raja
8. D. R. Ramesh
9. K. G. Nana Soundari
10. Manoj. H. Rajesh

PG Syllabus revision.

The Board suggested the following changes regarding the PG Syllabus revision.

1. As per the Guidelines prescribed by TANSCHÉ, the syllabus can be revamped.
2. "For the 'Energy physics paper' the units can be revamped."

The following members were present.

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| 1. Dr. D. Prem Anand - CHAIRMAN | 6. Dr. M. Melvin David Kumar - MEMBER. |
| 2. Dr. R. Mary Jenila - MEMBER. | 7. Mr. R. CHRISTHU RAJA - MEMBER |
| 3. Dr. S. G. Rajitha - MEMBER. | 8. Dr. G. RAVI - EXTERNAL EXPERT. |
| 4. Dr. M. Augustine - MEMBER. | 9. Dr. P. SELVARAJAN - EXTERNAL EXPERT |
| 5. Dr. L. Arun Jose - MEMBER. | 10. Dr. R. RAMESH - EXTERNAL EXPERT |
| | 11. K. GINANA SOUNDARI - PG REPRESENTATIVE (STUDENT) |

Signatures:

1. A. Premadasa
2. R. B. Jayawardene
3. S. G. Kumara
4. H. L.
5. P. J.
6. - ABSENT -
7. J. J.
8. S. J.
9. P. J.
10. R. J.
11. G. J.

2021-2022.

(UG syllabus revision)

Minutes of the Board of Studies in Physics
held on 23.04.2022 at 10.00 Am in the
department of Physics.

Members present:

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| 1. Dr. D. Prem Anand | - CHAIRMAN |
| 2. Dr. S. Paulraj | - MEMBER |
| 3. Dr. V. Sivashankar | - " |
| 4. Dr. G. David Rathiravelu | - " |
| 5. Dr. B. Helina | - " |
| 6. Dr. B. Helina | |
| 6. Dr. S. Annavenus | - " |
| 7. Dr. P. Selvarajan | - EXTERNAL EXPERT |
| 8. Dr. R. Mary Jenila | - MEMBER |
| 9. Dr. S. G. Rajith | - " |
| 10. Dr. M. Augustine | - " |
| 11. Dr. L. Arinjose | - " |
| 12. Dr. M. Melvin David Kumar | - " |
| 13. Mr. R. Christhura | - " |
| 14. Dr. L. Antony Selvam | - " |
| 15. Dr. D. E. Jain Ruth | - " |
| 16. Dr. S. Aron Rabi | - " |
| 17. S. Singa sayer | - STUDENT REPRESENTATIVE |

The board approved the minutes of the
previous meeting held on 06.02.2021.

It is suggested that senior faculty
member will be the head of Physics department
and also it is suggested that the HOD of Physics
will be the chairman of the Board of Studies.

UG syllabus revision:

In this paper, titled "Heat & Thermodynamics Wein's displacement, Rayleigh jeans law, Stefan's constant" can be included in Unit-I. Maxwell Boltzmann statistics can be included in the "Quantum Statistics" topic. The typical error in the title can be corrected.

for "Physics for Competitive Exams" paper. In Unit IV $\rightarrow$ the title can be changed into Electricity & Electronics. In Unit V Atomic & Nuclear Physics title can be introduced instead of the previous one. Diode, transistor, logic gates can be shifted to Unit 4. 600 Questions of Question bank can be prepared for this paper. 40% Questions can be asked for internal & external exam from this question bank.

In "Optics & Lasers" paper. In unit I "Compound microscope" is repeated. it can be removed. In unit II Haidenger's fringes & Michelson interferometer topics can be deleted. In "Mechanics" paper typical error can be corrected in Unit I. "Impulse of a force" can be changed to Impulse - Elastic & inelastic collision. Linear momentum topic can be added. "Impact between two smooth spheres" changed to "Direct impact between two smooth spheres". In Unit 2 M.I of a solid disc can be added. "radiation of gyration" can be changed to "radius of gyration". In unit 3, Application can be deleted. Typical errors can also be deleted. In unit 4 "Law of floatation" can be changed to "Laws of floatation". In Text books sl. nos can be corrected.

In "Instrumentation" paper "Taut Band" suspension topic can be included before Suspension galvanometer. In unit - II the topics Voltmeter, ammeter method of resistance topics can be deleted.

"DC indicating instrument" topic can be deleted.
"Thermocouple instrument" topic can be changed to
RF Ammeter (Thermocouple). In unit 3, 4, typical
error can be corrected.

In this paper "Digital Principles", in unit-I
typical error can be corrected.

In "Nuclear Physics" paper there is no correction
in that. In this paper "fibre optics" - Manufacturing
methods of fibres can be added.

In "Quantum mechanics" paper, in unit-II
"a ray microscope" into "X-ray microscope". In unit IV
"the" word can be deleted.

In this paper "Reactor Physics", the text book
can be compiled by the faculty members who
are handling this paper.

For Unit I & II → Dr. Melvin David Kumar

For III Unit → Dr. Anna Venug

For IV & V units - Dr. D.F. Jain Rathi

will be the in-charges.

For "Nano Physics" paper, In unit-III
under the topic "chemical methods" → particular
method can be added in that.

For this paper "Allied Physics-I"
(which is for Chemistry and Mathematics
department, the same subject code can
be followed).

In "Nuclear Energy & Applications" paper
Chernobyl disaster & Nuclear Hazards can
be added.

In unit II, these above said
topics can be deleted.

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In unit III Under the topic "Chernobyl disaster" - Fukushima & Three mile island disaster" topics can be added.

PG Syllabus revision:

In "Medical Physics" paper In unit V One Book for study can be added

In this paper "Condensed matter Physics" by S. B. Pillai & Arumugam can be added for Book for study.

The reference books in Serial no 2.4 can be changed.

In this paper titled "Spectroscopy" "Nuclear Quadrupole resonance" can be deleted

In this paper "Nuclear Physics and Elementary Particles", In unit II "Meson Theory of Nuclear forces" can be changed into "Meson Theory of Nuclear forces."

In this paper titled, "Nanophysics" topics in the unit III - can be rearranged.

In Unit IV, Fourier Transform Infrared Spectroscopy (FTIR), Scanning Probe microscope (SPM) can be included.

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 Regarding the Internship, there is no feasibility for Under graduate students.

It is also suggested that, in the possibility of Memorandums of Understanding with the Institution, it can be done with the Wind mill, Aralvaazhmozhi, Liquid propulsion space centre (Mahendragiri), Koodankulam Nuclear Power Project, Koodankulam & Indian Institute of Geo Magnetism, Krishnapuram.

Signatures.

1. A. Prasad
2. S. S.
3. V. S.
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