

16.03.2021

Minutes of the Board of studies meeting for PG<sup>37</sup> Physics course held on 16-03-2021 at 10.30 a.m in the Auditorium.

Sadakathullah Appa College - Timunelveli

Members present:

1. Dr. S.H. Mohamed Ameen

2. Dr. K. Mohanraj — University Nominee

3. Dr. K. Murali — Subject Expert

4. Mrs. M. Irifana Amrin — Alumni

5. Dr. S.M. Abdul kader

6. Mrs. A. Zeenath Bazeera

7. Dr. V. Chinnathambi

8. Mrs. A. Ferin Fathima —

9. Dr. K. Amutha

10. Dr. T. Santa Jostar

The members of the board completely analyzed the new syllabus, ~~2021~~ which is to be followed from 2021 onwards.

They have approved DSC, DSE, DSCP, IDC and Project

A) Discipline Specific Core (DSC - 11 papers)

1. Mathematical Physics - I
2. Classical Mechanics
3. Thermodynamics and Statistical Mechanics.
4. Mathematical Physics - II
5. Quantum Mechanics - I
6. Atomic and Molecular Spectroscopy.
7. Electromagnetic Theory.
8. Quantum Mechanics - II
9. Research Methodology.
10. Advanced Solid State Physics.
11. Nuclear and Elementary Particle Physics.

B) Discipline Specific Elective (DSE - 4 Papers)

1. Advanced: Electronics - I / Python Programming / Radiological Safety Aspects.
2. Advanced Microprocessor and Microcontroller / Material Physics and Processing Techniques / Plasma Physics etc.

3. Non-Linear Physics / Physics of Nanomaterials / Density Functional Theory.

4. Applied Optics and Laser Physics / Elementary Numerical Analysis / Quantum Field Theory.

c) Project

D) Interdisciplinary Courses (2 Papers)

1. Basics of Digital Electronics.

2. Energy Physics.

E) Discipline Specific Core Practical (DSCP - 8 papers)

1. General Physics Practicals I

2. Advanced Electronics Practicals - I

3. General Physics Practicals II

4. Advanced Electronics Practicals - II

5. Advanced Physics Practicals - I

6. Microprocessor and Microcontroller - Practicals

7. Advanced Physics Practicals - II

8. Numerical Methods and C++ Programming in Physics.

F) NPTEL - Online Course.

## Resolutions:

- The board has approved the PG Physics syllabus of 2021-24 and it is resolved to ~~follow~~ introduce the new courses and revise the syllabus (as mentioned in the Annexure) and to follow
1. Uniformity in the syllabus structure.
  2. Text Book to Reference Book ratio must be 5:3
  3. Include standard template for thesis/dissertation.
  4. Include review I and review II for internal marks of project viva voce
  5. Text Book and Reference Book format should be, Author name with initial, "Title of the book", Publisher name, Publishing place, (year), Edition. (mention the section in which the particular unit is present).
  6. Include the following reference books for the paper  
Microprocessor and Micro controllers.
    - i) Digital Principles and Applications by Malvino and Leach.
    - ii) Art of Electronics by Horowitz and Hinn.
    - iii) Electronic Devices by Thomas Floyd.
  7. Change the title of the Paper Molecular Spectroscopy into Atomic and Molecular Spectroscopy.

## Suggestions:

The PG board has recommended the following suggestions

1. Expand the topics in unit V of Materials Physics and Processing Techniques Paper.
2. Topics related to Quantum devices may be included in Quantum Mechanics - II and Photonic crystals may be included in EMT Paper
3. Classical Mechanics Paper can be changed into classical dynamics and some corrections may be done in unit V

**Board of Studies Meeting for PG Physics was held on 16.03.2021 at 10:30 a.m in the Auditorium**

**Sadakathullah Appa College –Tirunelveli**

Members Present:

1. Dr. S.H. Mohamed Ameen
2. Dr.K.Mohanraj  
Assistant Professor  
M.S University - University Nominee
3. Dr. K. Murali  
Professor - Subject Expert  
Anna University
4. Mrs. M. Irfana Amrin - Alumini
5. Dr. S.M.Abdul Kader
6. Mrs.A. Zeenath Bazeera
7. Dr. V. Chinnathambi
8. Mrs. A. Ferin Fathima
9. Dr.K. Amutha
10. Dr. Sainth Jostar. T

The members of the board completely analysed the new syllabus, which is to be followed from 2021 onwards. They have approved DSC, DSE, DSCP, IDC and Project.

**(A) Discipline Specific Core (DSC-11 Papers)**

1. Mathematical Physics-I
2. Classical Mechanics
3. Thermodynamics and Statistical Mechanics
4. Mathematical Physics-II
5. Quantum Mechanics-I
6. Atomic and Molecular Spectroscopy
7. Electromagnetic Theory
8. Quantum Mechanics-II
9. Research Methodology
10. Advanced Solid State Physics
11. Nuclear and Elementary Particle Physics

**(B) Discipline Specific Elective (DSE- 04 Papers)**

1. Advanced Electronics / Python Programming/ Radiological Safety Aspects
2. Advanced Microprocessor and Microcontroller / Material Physics and Processing Techniques / Plasma Physics.
3. Non-Linear Physics / Physics of Nanomaterials / Density Functional Theory.
4. Applied Optics and Laser Physics / Elementary Numerical Analysis / Quantum Field Theory.

**(C) Project**

**(D) Interdisciplinary Courses (2 Papers)**

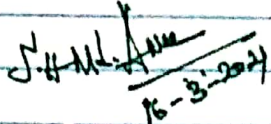
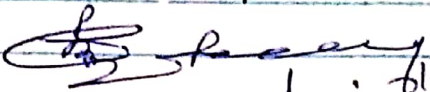
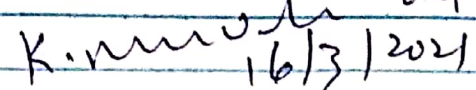
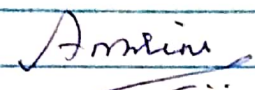
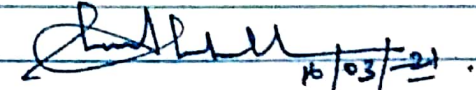
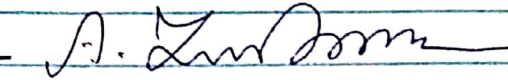
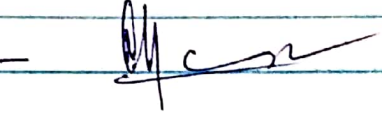
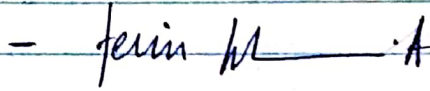
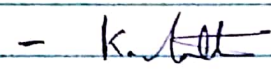
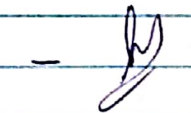
1. Basics of Digital Electronics
2. Energy Physics

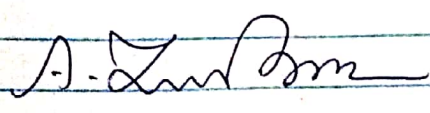
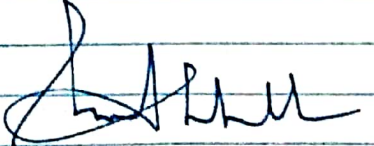
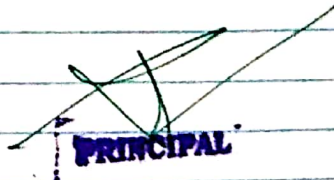
**(E) Discipline Specific Core Practical (DSCP-8 Papers)**

1. General Physics Practicals –I
2. Advanced Electronics Practicals -I
3. General Physics Practicals –II
4. Advanced Electronics Practicals -II
5. Advanced Physics Practicals –I
6. Microprocessor and Microcontroller – Practicals
7. Advanced Physics Practicals –II
8. Numerical Methods and C++ Programming in Physics

**(F) NPTEL – Online Course**

Signature of members present

1. Dr. S.H. Mohamed Ameen -  16-3-2024
2. Dr. K. Mohanraj -  16/03/2024
3. Dr. K. Murali -  16/3/2024
4. Mrs. M. Irfana Amrin - 
5. Dr. S.M. Abdul Kader -  16/03/24
6. Mrs. A. Zeenath Bazeera - 
7. Dr. V. Chinnathambi - 
8. Mrs. A. Ferin Fathima - 
9. Dr. K. Amutha - 
10. Dr. T. Santa Jaster - 

**CHAIRMAN / CHAIRPERSON**

**DEAN OF SCIENCES**

**PRINCIPAL**



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## Annexure - I

### Department of Physics (PG)

The Board of Studies of Department of Physics (PG) was held on 16.3.2021 for the approval of 2021-2024 syllabus. The number of new courses, courses focussing on Skill Development / Employability / Entrepreneurship, the percentage of revision are mentioned below.

#### New Courses introduced

S. No.	Title of the Course	Course Code
1.	Python Programming	21PEPH11B
2.	Radiological safety aspects	21PEPH11C
3.	Material Physics and Processing techniques	21PEPH21B
4.	Plasma Physics	21PEPH21C
5.	Density Functional Theory	21PEPH31C
6.	Quantum Field Theory	21PEPH41C

#### Courses focused on Skill Development / Employability / Entrepreneurship

S. No.	Title of the Course	Course Code	Category
1.	General Physics Practicals – I	21PCPH1P1	Skill Development
2.	Advanced Electronics Practicals – I	21PCPH1P2	Skill Development
3.	General Physics Practicals – II	21PCPH2P1	Skill Development
4.	Advanced Electronics Practicals – II	21PCPH2P2	Skill Development
5.	Research Methodology	21PCPH33	Skill Development
6.	Advanced Physics Practicals – I	21PCPH3P1	Skill Development
7.	Microprocessor and Microcontroller Practicals	21PCPH3P2	Skill Development
8.	Project	21PPPH41	Skill Development
9.	Advanced Physics Practicals – II	21PCPH4P1	Skill Development
10.	Numerical methods and C++ Programming	21PCPH4P2	Skill Development
11.	Advanced Electronics	21PEPH11A	Employability
12.	Python Programming	21PEPH11B	Employability
13.	Advanced Microprocessor and Microcontrollers	21PEPH21A	Employability
14.	Energy Physics	21PIPH31	Entrepreneurship







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## Percentage of Revision

S.No.	Courses	Course Code	Percentage %
1.	Mathematical Physics - I	21PCPH11	10%
2.	Classical mechanics	21PCPH12	10%
3.	Thermodynamics and Statistical Mechanics	21PCPH13	34%
4.	Advanced Electronics	21PEPH11A	64%
5.	Python Programming	21PEPH11B	100%
6.	Radiological safety aspects	21PEPH11C	100%
7.	General Physics Practicals – I	21PCPH1P1	8%
8.	Advanced Electronics Practicals – I	21PCPH1P2	32%
9.	Basics of digital Electronics	21PIPH11	20%
10.	Mathematical Physics - II	21PCPH21	26%
11.	Quantum Mechanics - I	21PCPH22	8%
12.	Atomic and molecular spectroscopy	21PCPH23	50%
13.	Advanced microprocessor and microcontroller	21PEPH21A	2%
14.	Material Physics and Processing techniques	21PEPH21B	80%
15.	Plasma Physics	21PEPH21C	100%
16.	General Physics Practicals – II	21PCPH2P1	16%
17.	Advanced Electronics Practicals – II	21PCPH2P2	32%
18.	Quantum Mechanics - II	21PCPH32	20%
19.	Research methodology	21PCPH33	24%
20.	Non Linear Physics	21PEPH31A	22%
21.	Physics of nanomaterials	21PEPH31B	88%
22.	Density Functional Theory	21PEPH31C	100%
23.	Advanced Physics Practicals – I	21PCPH3P1	28%
24.	Microprocessor and Microcontroller Practicals	21PCPH3P2	35%
25.	Energy Physics	21PIPH31	12%
26.	Advanced Solid state Physics	21PCPH41	2%
27.	Nuclear and Elementary particle Physics	21PCPH42	22%
28.	Applied optics and Laser Physics	21PEPH41A	50%





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29.	Elementary numerical analysis	21PEPH41B	96%
30.	Quantum field theory	21PEPH41C	100%
31.	Advanced Physics Practicals – II	21PCPH4P1	14%
32.	Numerical methods and C++ Programming in Physics	21PCPH4P2	21%

Total Percentage of Revision: 39%

Total number of Courses: 34



PRINCIPAL

