

Minutes of the Meeting of Board of Studies on the

Integrated M. Sc. - Ph. D. Program

A meeting of the Board of Studies (BOS) of Physics Department of the School of Applied Sciences was held in Conference Hall of the Campus - 3 on 17-02-2018 at 1030hr. Following members were present in the meeting:

- 1) Prof. S. L. Sharma, Chairman, PG Program, KIIT Deemed to be University *S. L. Sharma* 17.02.18
- 2) Prof. K. K. Nanda, IISC, Bangalore, External member *K. K. Nanda* 17/02/18
- 3) Dr. V. K. Aswal, BARC, Bombay, External member *V. K. Aswal*
- 4) Dr. P. K. Sahoo, NISER, BBSR, External member *P. K. Sahoo* 17.2.18
- 5) Prof. P. C. Dash, Internal Member
- 6) Prof. N. Santi, Internal Member *N. Santi* 17.2.18
- 7) Dr. S. K. S. Parashar, Internal Member *S. K. S. Parashar* 17/02/2018
- 8) Dr. B. Bhushan, Internal Member *Bhushan Bhushan* 17/2/18
- 9) Dr. S. Mangal, Internal Member *Sutarn mangal* 17.2.18
- 10) Dr. M. K. Maharana, Extradepartmental Member *M. K. Maharana* 17/2/18
- 11) Dr. S. K. Das, Convener *Susanta Kumar Das* 17.2.18
- 12) Dr. P. Pattojoshi, Chairperson *P. Pattojoshi* 17/02/18

Proposed syllabus of the integrated M. Sc. - Ph. D. Program in Physics (1st and 2nd Semesters) was discussed in the meeting. Following were the suggestions of the BOS members:

- 1) Program title was recommended to be "Integrated M. Sc. - Ph. D. in Physics".
- 2) Electrodynamics was shifted from 1st semester to 2nd semester.
- 3) Tutorials were introduced in all of the theory subjects.
- 4) Credits of each theory subject were increased to 4 leading to change in total credits of each semester.
- 5) Nuclear and Particle Physics was shifted to 3rd Semester.
- 6) Special papers were replaced by electives.
- 7) Open Elective was introduced in the 4th semester.
- 8) Physics Lab was removed from the 4th semester.
- 9) Elective subjects were put into three different categories: Elective-I, Elective-II and Elective-III.
- 10) Corrected syllabi of all the subjects of all the Semesters will be circulated amongst all the BOS members for suggestions and rectification, if any.
- 11) It was proposed by Dr. P. K. Sahoo that open electives within the purview of the School can be introduced from the 1st semester onwards (e.g. Major in Physics & Minor in Chemistry or Maths) with certain number of floating credits. This shall add the scope for interdisciplinary research. All the members agreed to introduce this structure after an academic year or subsequently.

The meeting ended with sincere thanks to all the external members and Prof. S. L. Sharma, Chairman, PG Program.

Attached: course curriculum and syllabus

S. L. Sharma



SCHOOL OF APPLIED SCIENCES
KALINGA INSTITUTE OF INDUSTRIAL TECHNOLOGY
DEEMED TO BE UNIVERSITY, BHUBANESWAR-751024

Curriculum for Integrated M. Sc. - Ph. D. Program in Physics

Subject Name	L-T-P	Credits	Contact Hours per Week
SEMESTER - I			
Classical Mechanics	3-1-0	4	4
Mathematical Physics	3-1-0	4	4
Quantum Mechanics-I	3-1-0	4	4
Electronics for Scientists	3-1-0	4	4
Physics Laboratory-I : Electronics	0-0-3	2	3
Physics Laboratory-II : Modern Physics	0-0-6	4	6
	Total	22	25
SEMESTER - II			
Quantum Mechanics-II	3-1-0	4	4
Statistical Mechanics	3-1-0	4	4
Electrodynamics	3-1-0	4	4
Condensed Matter Physics	3-1-0	4	4
Physics Laboratory-III : Modern Optics	0-0-3	2	3
Physics Laboratory-IV: Condensed Matter Physics	0-0-6	4	6
	Total	22	25
Summer Internship			
Academic/Industrial Summer Internship		04	45 days
SEMESTER - III			
Atomic & Molecular Physics	3-1-0	4	4
Nuclear and Particle Physics	3-1-0	4	4
Computational Methods	3-1-0	4	4
Elective-I	4-0-0	4	4
Physics Laboratory-V : Spectroscopy and Advanced Physics	0-0-6	4	6
Project-I	0-0-6	4	6
	Total	24	28
SEMESTER - IV			
Elective-II	4-0-0	4	4
Elective-III	4-0-0	4	4
Open Elective	3-0-0	3	3
Project-II	0-0-15	10	15
	Total	21	26

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Elective-I			
Vacuum Technology	4-0-0	4	4
Thin film Technology	4-0-0	4	4
Experimental Techniques for Condensed Matter Research	4-0-0	4	4
Nuclear Techniques for Condensed Matter	4-0-0	4	4

Elective-II			
Magnetic and Optical Materials	4-0-0	4	4
Semiconductor Technology	4-0-0	4	4
Nanoscience and Technology	4-0-0	4	4
Soft Materials and Biophysics	4-0-0	4	4

Elective-III			
Nonlinear Optics ✓	4-0-0	4	4
General Relativity and Cosmology	4-0-0	4	4
Quantum Optics	4-0-0	4	4
Plasma Physics ✓	4-0-0	4	4
Nonlinear Oscillations and Waves	4-0-0	4	4

SES

SPS
S. Prakash

Abul
S. Mergal

SW 01

Kananda
O/S

Blushan



**SCHOOL OF APPLIED SCIENCES
KALINGA INSTITUTE OF INDUSTRIAL TECHNOLOGY (KIIT)
DEEMED TO BE UNIVERSITY, BHUBANESWAR-24**

Ref. No-KIIT-DU/SAS/71/18

Date-03-04-2018

The Registrar

Esteemed Madam,

Sub: Agenda for 33rd Academic Council Meeting

We place the following items for consideration in the above:

ITEM I: Approval of Syllabus for different subjects of (1st & 2nd Semester subjects)

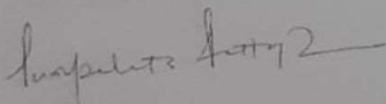
- A. Integrated M. Sc.- Ph D program in Applied Physics. (Annexure I A)
- B. Integrated M. Sc.- Ph D program in Applied Chemistry (Annexure I B)
- C. Integrated M. Sc.- Ph D program in Mathematics & Data Science (Annexure I C)

ITEM II: Approval of syllabi of the following Open Elective courses (Recommended by respective BOS).

1. Applied Superconductivity (PH 4071)
2. Open Science, Innovation and Sustainability (PH 4073)
3. Energy Storage Technology & Management (PH 4075)
3. Solid Waste Management (CH 4071)

Thanking you,

Sincerely,



Dean

*GITAM University
Chemistry
Academy of research
& innovation
Fellowship*