Placed in the folder Minutes of BoS meeting in Physics held 02/07/2020 along with Appendix I- refer r.h.s. 80/C to 2/C.

Submitted for further needful action.

(Prof. K.R.S. Priolkar

Head, Aept. of Physics

& Dean, Faculty of Natural Sciences

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# GOA UNIVERSITY DEPARTMENT OF PHYSICS Form A-7 (See OA-14 of Part A)

# Minutes of the BOS in Physics meetings held on 2<sup>nd</sup> July 2020

# BOS committee members remain present for the meeting:

- 1. Prof. K. R. Priolkar (Chairman, Dept. of Physics, Goa University)
- 2. Dr. Bholanath Pahari (Dept. of Physics, Goa University)
- 3. Dr. Sudhir Cherukulappurath (Dept. of Physics, Goa University)
- 4. Dr. Jaison Joseph (Govt. College of Arts, Sciences and Commerce, Khandola, Goa)
- 5. Dr. Shirish Kamat (Govt. College of Arts, Sciences and Commerce, Quepem, Goa)
- 6. Ms. Mandakini G. S. Kudaiker (PES College, Ponda, Goa)
- 7. Prof. P. R. Sarode (Goa)
- 8. Prof. P. B. Vidyasagar (Savitribai Phule Pune University, Pune)
- 9. Prof. Balaji Prakash (CSIR-CFTRI, Mysore)
- 10. Prof. Umesh Waghmare (JNCASR, Bengaluru)
- 11. Prof. Mukul Laad (IMSc, Chennai)

## BOS committee members requested for leave of absence for the meeting

- 1. Prof. Satishchandra B. Ogale, (IISER, Pune)
- 2. Mr. Sanjay Jahagirdar (Govt. College of Arts, Sciences and Commerce, Sanquelim, Goa)

## Special Invitees who attended:

- 1. Prof. Ramesh V. Pai (Goa University)
- 2. Dr. Rajesh Kumar Hyam (Goa University)
- 3. Dr. Venkatesha Hathwar (Goa University)
- 4. Dr. Reshma Raut Dessai (Goa University)
- 5. Dr. Pranav Naik (Goa University)

# Agenda items for the meetings:

- 1. Discussion and Approval of Course structure and syllabus of M.Sc. Physics with specialization in Biophysics, Computational Physics and Solid State Physics
- 2. Any other matter with the permission of the Chair.

# Part-A

1. Recommendations regarding courses of study in the subject or group of subjects at the Under-graduate level.

NIL

2. Recommendations regarding courses of study in the subject or group of subjects at the Post-graduate level.

Members discussed and approved the course structure and syllabus of the listed courses for M.Sc. Physics with specializations in Biophysics, Computational Physics and Solid State Physics. The members also recommended that syllabi for special optional courses in semester IV for Biophysics and Computational Physics may be framed after the faculty members for these specialization are appointed. The approved course structure and the syllabus is given as Annexure I.

#### Part-B

- (i) Scheme of examinations at the under-graduate level Non-agenda item
- (ii) Scheme of examinations at the post-graduate level Non-agenda item.
- (iii) Panel of examiners for different examinations at undergraduate level Non-agenda item
- (iv) Panel of examiners for different examinations at post-graduate level Non-agenda item

#### Part-C

(i) Recommendations regarding preparation and publication of selection of reading material in any subject or group of subject and names of persons recommended for appointment to make the selection.

Non-agenda item.

#### Part-D

Recommendations regarding general academic requirements in the Department of University or affiliated Colleges.

Non-agenda item.

## Part-E

- (i) Recommendations of text books for the courses of study at the under-graduate level.
  - Non-agenda item.
- (ii) Recommendations of text books for the courses of study at the post-graduate level.

  Non-agenda item

## Part-F

(i) The declaration by the Chairman that the minutes were read out by the Chairman at the meeting itself.

Date: 2<sup>nd</sup> July 2020

Place: Goa University

# Part-G

Remarks of the Dean

(i) The minutes are in order

(ii) May be recommended for approval of Academic Council

(iii) Special remarks if any

Date: 06/07/2020.

Place: Goa University

Signature of the Dean

Dean
Faculty of Natural Science
Goa University
Goa

TO SERVICE STATE OF THE SERVIC	Semester I	
Course Code		Number of
DUGG 100		credits
PHGC-100	Bridge course in Mathematical Methods	2
PHGC-101	Widthernation 1 mystes	4
PHGC-102	Classical internation	4
PHGC-103	Electromagnetic Theory	4
DU 00 110	Optional courses (any two)	
PHGO-110	Computer Programming in Fortran 95	2
PHGO-111 PHGO-112	Computer Programming with C	2
PHGO-112	Electronics Practical	2
	Mini project  The calculation of CRA, but about the completed sug	2
Not included to	or the calculation of GPA, but should be completed such	cessiully.
Course Code	Semester II	
Course Code	Course Title	Number of
PHGC-106	Overture Machanias	credits
	Quantum Mechanics	4
PHGC-107	Electronics &	4
PHGC-108	Statistical Mechanics	4
	Optional courses (any one)	
PHGO-119	General Physics Practical	4
PHGO-120	Methods of Experimental Physics	4
	Semester III	
Course Code	Course Title	Number of
DUCO 201	•	credits
PHGO-301	Summer Fellowships	2
DUICO 001	Solid State Physics	
PHSC-201	Structure, Lattice and Thermal Properties of	3
PHSC-202	<u>S</u> olids	
PHNC_707	The state of the s	1
11150-202	Band Theory and Electronic Properties of	3
	Band Theory and Electronic Properties of Solids	3
PHSC-203	Solids  Magnetic, Superconducting and Optical	
	Solids  Magnetic, Superconducting and Optical  Properties of Solids	2
PHSC-203	Solids  Magnetic, Superconducting and Optical  Properties of Solids  Optional courses (any two)	
PHSC-203	Solids  Magnetic, Superconducting and Optical Properties of Solids Optional courses (any two) Nuclear physics and Elementary Particle Physics	2
PHGO-212 PHGO-213	Solids  Magnetic, Superconducting and Optical Properties of Solids Optional courses (any two) Nuclear physics and Elementary Particle Physics Laser Physics and its applications	2
PHSC-203	Solids  Magnetic, Superconducting and Optical Properties of Solids Optional courses (any two) Nuclear physics and Elementary Particle Physics Laser Physics and its applications Solid State Physics Practical	4 4
PHSC-203 PHGO-212 PHGO-213 PHSO-214	Solids  Magnetic, Superconducting and Optical Properties of Solids Optional courses (any two) Nuclear physics and Elementary Particle Physics Laser Physics and its applications Solid State Physics Practical Computational Physics	2
PHSC-203  PHGO-212 PHGO-213 PHSO-214  PHCC-221	Solids  Magnetic, Superconducting and Optical Properties of Solids Optional courses (any two) Nuclear physics and Elementary Particle Physics Laser Physics and its applications Solid State Physics Practical Computational Physics Advanced Quantum Mechanics	2 4 4 4
PHSC-203  PHGO-212 PHGO-213 PHSO-214  PHCC-221 PHCC-222	Solids  Magnetic, Superconducting and Optical Properties of Solids Optional courses (any two) Nuclear physics and Elementary Particle Physics Laser Physics and its applications Solid State Physics Practical Computational Physics Advanced Quantum Mechanics	2 4 4 4 3
PHSC-203  PHGO-212 PHGO-213 PHSO-214  PHCC-221	Solids  Magnetic, Superconducting and Optical Properties of Solids Optional courses (any two) Nuclear physics and Elementary Particle Physics Laser Physics and its applications Solid State Physics Practical Computational Physics Advanced Quantum Mechanics Advanced Statistical Mechanics	2 4 4 4 3 3
PHSC-203  PHGO-212 PHGO-213 PHSO-214  PHCC-221 PHCC-222 PHCC-223	Solids  Magnetic, Superconducting and Optical Properties of Solids Optional courses (any two) Nuclear physics and Elementary Particle Physics Laser Physics and its applications Solid State Physics Practical Computational Physics Advanced Quantum Mechanics Advanced Statistical Mechanics Numerical Techniques Optional courses (any two)	2 4 4 4 3
PHSC-203  PHGO-212  PHGO-213  PHSO-214  PHCC-221  PHCC-222  PHCC-223	Solids  Magnetic, Superconducting and Optical Properties of Solids Optional courses (any two) Nuclear physics and Elementary Particle Physics Laser Physics and its applications Solid State Physics Practical Computational Physics Advanced Quantum Mechanics Advanced Statistical Mechanics Numerical Techniques Optional courses (any two)	2 4 4 4 3 3
PHSC-203  PHGO-212 PHGO-213 PHSO-214  PHCC-221 PHCC-222 PHCC-223  PHGO-212 PHGO-213	Solids  Magnetic, Superconducting and Optical Properties of Solids Optional courses (any two) Nuclear physics and Elementary Particle Physics Laser Physics and its applications Solid State Physics Practical Computational Physics Advanced Quantum Mechanics Advanced Statistical Mechanics Numerical Techniques Optional courses (any two) Nuclear and Elementary Particle Physics	2 4 4 4 3 3
PHSC-203  PHGO-212  PHGO-213  PHSO-214  PHCC-221  PHCC-222  PHCC-223  PHGO-212	Solids  Magnetic, Superconducting and Optical Properties of Solids Optional courses (any two) Nuclear physics and Elementary Particle Physics Laser Physics and its applications Solid State Physics Practical Computational Physics Advanced Quantum Mechanics Advanced Statistical Mechanics Numerical Techniques Optional courses (any two) Nuclear and Elementary Particle Physics Laser Physics and its applications	2 4 4 4 3 3 2
PHSC-203  PHGO-212 PHGO-213 PHSO-214  PHCC-221 PHCC-222 PHCC-223  PHGO-212 PHGO-213	Solids  Magnetic, Superconducting and Optical Properties of Solids Optional courses (any two) Nuclear physics and Elementary Particle Physics Laser Physics and its applications Solid State Physics Practical Computational Physics Advanced Quantum Mechanics Advanced Statistical Mechanics Numerical Techniques Optional courses (any two) Nuclear and Elementary Particle Physics	2 4 4 4 4 3 3 2

	Biophysics	A CONTRACTOR OF THE CONTRACTOR	
PHBC-200*	Introduction to Biology and Biophysics	4	
PHBC-241	Molecular Biophysics	4	
PHBC-242	Methods in Biophysics	4	
Optional courses (any two)			
PHBO-251	Solid State and Biomaterials	4	
PHGO-213	Laser Physics and its applications	4	
PHBO-252	Biophysics Practical	4	
*Not included for the	the calculation of GPA, but should be completed success	ssfully.	
	Semester IV		
Course Code	Course Title	Number of	
PHGO-311	Dissertation	credits	
PHSO-302	Neutron Physics	8	
PHSO-303	Superconductivity and Superfluidity	4	
PHSO-304	X-ray spectroscopy	4	
PHSO-310	Numerical methods and Fortran parallel	4	
	programming using open mp	4 .	
PHSO-311	Phase transitions and Critical Phenomena		
PHSO-312	Spectroscopic techniques in Condensed Matter	4	
	Physics Physics	4	
PHSO-313	Physics of Energy materials	`	
PHSO-314	Documentation using Latex	4	
PHSO-315	Nanoscience and Technology	2	
PHSO-316	Magnetism in Condensed Mottor Di	4	
PHSO-317	Introduction to Crystallography and X-ray	4	
Director of the second	Dillraction	4	
PHBO-321	Neurobiology and Neurophysis		
PHBO-322	Radiation Physics and its applications	4	
PHCO-341	and its applications	4	
PHCO-342			
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