

RAMA DEVI WOMEN'S UNIVERSITY
VIDYA VIHAR, BHUBANESWAR

Physics

Proceeding of the meeting of the Board of Studies in Biotechnology held on 25.04.2023 at 11 AM in the Board Room of the Examination section, Rama Devi Women's University, Vidya Vihar, Bhoinagar, Bhubaneswar-22.

The following members were present:

1. Dr Raj Kumar Joshi, Coordinator of Physics, RDWU
2. Dr. Anita Mekap, Lect in Physics, SBWC
3. Shri Prasant Kumar Subudhi, Lect in Physics, KNWC
4. Smt. Aparajita Mohapatra, Lect. In Physics, SSSCW

At the outset of the meeting, Dr. Anita Mekap, Lect in Physics, SBWC was formally selected as the Chairperson of the Board of Studies in Physics for the Academic Year 2023-24.

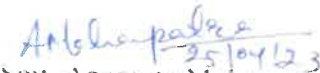
The recommendations of the Board in respect of the Regulations, detailed Syllabus, Text Books and other items are appended in the prescribed form.


Among others, the board made the following recommendations


1. The board recommended the name with contact no. and email IDs for board of conducting examiners, moderation board, examiners and paper setters for the -3 degree (Physics) for regular and back examinations 2023-24 in the prescribed format.
2. The board recommended that the question papers are to be set unit-wise for regular, back and for onward examinations in 2023-24 for B.Sc Physics course.
3. It was unanimously decided by all the members present to recommend the ^{modified} ~~existing~~ CBCS course pattern of B.Sc Physics for the Regular, Back and for onward examinations in 2023-24.
4. The Board recommended that the second unit (accounting for 25% of the total four units) of each paper should be ear-marked for student's self-study as per Govt. rules. Nevertheless, the board unanimously agreed that faculty members must ensure the completion of all modules of a paper including the self-study modules.
5. The Board also authorized the Controller of Examinations, RDWU, to take alternative measures as and when required in case of urgency only after consulting with the Head Coordinator of the department of Physics.
6. The board also unanimously recommended the implementation of New Academic Framework in line with NLP as per recommendation of UGC.

The meeting ended with a vote of thanks to the Chair


Shri Prasant Kumar Subudhi
Lect in Physics, KNWC Lect.


Smt. Aparajita Mohapatra
In Physics, SSSCW


Dr. Anita Mekap
Lect in Physics, SBWC


Dr. Raj Kumar Joshi
Coordinator, Dept. of Physics, RDWU

Syllabus modification

DSE-II (Nuclear & Particle physics)

- ① Portion titled "Concept of Garrow window, heavy element production, π and S meson path" was removed from Unit-1
- ② Portion titled "Basis of Alpha decay, beta decay, Garrow factor, Geiger Nuttal law" was added to Unit-1.

Amr
25.4.23

Phanish
25/4/23

Arulraj
25.04.23

Rishi
25/04/23



RAMA DEVI WOMEN'S UNIVERSITY, VIDYA VIHAR
BHUBANESWAR-22

Proceeding of the meeting of the Board of Studiesin..... Physics.....
held on 07.05.2022 at 11.30A.M / P.M. in the University Office,
Bhoi Nagar, Bhubaneswar-22.

Members Present :

1. Dr Anita Meikap
2. Sr Prashanta K. Subudhi
3. Dr. Aparajita Mohapatra
4. Dr. Sujata Mohanty
- 5.
- 6.
- 7.
- 8.

Prof. Dr. Anita Meikap is selected as Chairman of the
Board for the Academic year 2022-23

The recommendations of the Board in respect of the Regulations, Detailed Syllabus, Text
Books and other items are appended the prescribed form.

Signature of the Members:-

Anita Meikap
CHAIRMAN

1. Subudhi
21/5/22
2. Aparajita Mohapatra
07/05/22
3. Sujata Mohanty
7/5/2022
- 4.
- 5.
- 6.
- 7.
- 8.

Proceedings of the Board of Studies meeting
Physics held on 07.05.2022 at 11.30 am

Members Present

1. Dr. Anilā Mekap.
2. Sri Prashanta K. Subudhi
3. Dr. Aparajita Mahapatra.
4. Dr. Sujalā Mohanty

Following resolutions were taken:

1. Dr. Anilā Mekap, was appointed as Chairperson of the board.
- ii. The blending learning approach for UG course UG-II is adapted as per Govt. rule.
- (iii) Chairperson of the BOS may be authorized to make any change in the list of examiners, paper setters, Moderators and Board of conducting examiners.
- (iv) No modification was done in the model syllabus of UG Physics.

Anilā Mekap.

~~Present~~

Aparajita Mahapatra
7/5/22

Sujalā Mohanty
7/5/2022



RAMA DEVI WOMEN'S UNIVERSITY, VIDYA VIHAR
BHUBANESWAR-22

Proceeding of the meeting of the Board of Studies in Physics (Virtual mode)
held on 14.7.2021 at 12:15 A.M / P.M. in the University Office, (Google meet)
Bhoi Nagar, Bhubaneswar-22.

Members Present :

1. Dr Binodini Pradhan (Consent mail attached)
2. Dr Biswadas Mohanty (Consent mail attached)
3. Dr Sujati Mohanty
- 4.
- 5.
- 6.
- 7.
- 8.

• It is also recommended that Unit-II of each paper is considered as blended studies. The BOS authorizes the COE to take alternative measures in case of urgency.

Prof. Dr. Binodini Pradhan is selected as Chairman of the Board for the Academic year 2021-22.

The recommendations of the Board in respect of the Regulations, Detailed Syllabus, Text Books and other items are appended the prescribed form.

Signature of the Members:-

Binodini Pradhan
CHAIRMAN

1. Sujati Mohanty
14.7.21
2. Binodini Pradhan
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

Proceedings of the board of studies meeting
in Physics held on 14.7.2021 by virtual mode
at 12.15 PM

Members present:

1. Dr Binodini Pradhan
2. Dr. Biswadev Mohanty
3. Dr. Sujali Mohanty

Following resolutions were taken:

- (i) Dr Binodini Pradhan, was appointed as chairperson of the board.
- (ii) The blended learning approach for UG course unit - II is adapted as per Govt. rule.
- (iii) The board of studies authorizes COE to take alternative measures in case of urgency.
- (iv) No modification was done in the model syllabus of UG Physics.

Binodini Pradhan

Sujali Moh
14.7.21

SYLLABUS FOR UNDER GRADUATE COURSE IN PHYSICS (Bachelor of Science Examination)



RAMA DEVI WOMEN'S UNIVERSITY
VIDYA VIHAR, BHUBANESWAR-22

UNDER CHOICE BASED CREDIT SYSTEM

No changes in syllabus 2022-23

Pharadi
7/5/22

Arulapalan
07/05/22

No changes in
Syllabus 2021-22

Sybil
14.7.2021

Sybil
15.8.2020

Amr
7/5/22

Amr
7/5/2022

Binalini Pradhan



RAMA DEVI WOMEN'S UNIVERSITY, VIDYA VIHAR
BHUBANESWAR-22

125

Proceeding of the meeting of the Board of Studies in Physics
held on 25.8.2020 at 11 A.M / P.M. in the University Office,
Bhoi Nagar, Bhubaneswar-22.

Members Present :

1. Dr. Profulla Kumar Mishra
2. Dr. Sujali Mishra
3. Sharon Pradhan
- 4.
- 5.
- 6.
- 7.
- 8.

Prof./Dr. Profulla Kumar Mishra is selected as Chairman of the
Board for the Academic year 2020-21

The recommendations of the Board in respect of the Regulations, Detailed Syllabus, Text
Books and other items are appended the prescribed form.

Signature of the Members :-


CHAIRMAN

1. Profulla Kumar Mishra
2. Dr. Sujali Mishra
3. Sharon Pradhan
- 4.
- 5.
- 6.
- 7.
- 8.

(124)

Proceeding of the Board of studies held
on 25.8.20 at 11 AM in the Conference
Hall of the University and following
members were present.

Members present

1. Dr Prafulla K. Mishra
2. Dr. Sujali Mohanty

Resolution taken

1. The blended learning approach for the UG course Unit-2 is adopted as per Government rules.
2. The Board of studies authorized the COE to take alternative measures in case of urgency.

Sujali Mohanty
25.8.20



199

RAMA DEVI WOMEN'S UNIVERSITY,
VIDYA VIHAR, BHUBANESWAR-22

Proceeding of the meeting of the Board of Studies in Physics
held on 28.8.19 at 11.40 A.M / P.M. in the University Office,
Bhoi Nagar, Bhubaneswar-22.

Members Present :

1. Dr. Laxmidhar Mahapatra
2. Dr. Prafulla Kumar Mishra
3. Dr. Sujali Mohanty
- 4.
- 5.
- 6.
- 7.
- 8.

Prof. Dr. L. Mahapatra is selected as Chairman of the Board for the Academic year 2019-20

The recommendations of the Board in respect of the Regulations, Detailed Syllabus, Text Books and other items are appended the prescribed form.

Signature of the Members :-

1. L Mahapatra
2. P.K.
28.8.19
3. Sujali
28.8.19
- 4.
- 5.
- 6.
- 7.
- 8.

L Mahapatra
CHAIRMAN

RAMA DEVI WOMEN'S UNIVERSITY, BHUBANESWAR

Proceeding of the meeting of the Board of Studies in Phy

held on 7.8.2018 at 11:30 AM in the University Office
Bhojnagar, Bhubaneswar-22

Members Present :

1. Laxmidhar Mahapatra
2. Binodini Pradhan
3. Anita Meikap
4. Dr. R. N. Mishra
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

Prof./ Dr. Binodini Pradhan H.O.D. Phy RDWU, is selected Chairman of the Board for the Academic year 20.18-19

The recommendations of the Board in respect of the Regulations, Detailed Syllabus, Text Books and other items are appended the prescribed form. Annexure I

Signature of the Members :-

Binodini Pradhan
CHAIRMAN

1. Binodini Pradhan
2. L Mahapatra
3. Prof R. N. Mishra
4. Prof
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

CoE

The BOS in Physics to be held on 03.08.18, could not be held today as the ^{External} members did not come. On contacting them over phone - Dr. M. Bhuyan intimated to be out of station. All members (Dr. Bhuyan, Prof R.K Mishra, Prof R D Das) informed of not getting any letter to this effect, so were unable to attend. ^{Further} There are no PET depts in SBW or KNW College as listed in BOS. This is being intimated for your kind further action for fixing new date of BOS.

Boradhuw
03/08/18
H.O.D., Physics

HOD, Physics

As directed, BOS meeting in physics is re-scheduled and it will be held on 07.8.18 at 11.30. Accordingly, all the members are intimated. For your information.

Dr
UTTR

Annexure - I

ed in the BOS meeting of Physics held on 07.08.18 at 11.30AM.
The following experiments will be included in the different Core II
papers of Semester I

Core II : Mechanics

- (i) σ & γ by bending of beams
- (ii) Surface Tension by capillary rise
- (iii) Visc Coefficient of viscosity by Stokes Law and
Searles viscometer

E. Sub
7-08-18

W. Mahesh
7/8

Bradhan
07/08/18

OMP
7-8-18

B.Sc. in physics

RDWU U.G. SYLLABUS STRUCTURE (w.e.f 2023-24)

Semester-1									
Sl. No	Nature of Course	Course Code	Paper Title	Units	Credits	Marks			
						Mid sem	End sem	Prac	Total
1	Hard core	Core -I	Mathematical Physics-I	4	6	15	60	25	100
2	Hard core	Core II	Mechanics	4	6	15	60	25	100
3	Core elective	Generic Elective	GE-1	4	6	15	60	25	100
4	Soft core	AECC-1	Ability Enhancement Compulsory Course-I	-	4	20	80	-	100
Semester-2									
Sl. No	Nature of Course	Course Code	Paper Title	Units	Credits	Marks			
						Mid sem	End sem	Prac	Total
1	Hard core	Core - III	Electricity and Magnetism	4	6	15	60	25	100
2	Hard core	Core IV	Waves and Optics	4	6	15	60	25	100
3	Core elective	Generic Elective	GE-2	4	6	15	60	25	100
4	Soft core	AECC-2	Ability Enhancement Compulsory Course-I I	-	4	20	80	-	100
Semester-3									
Sl. No	Nature of Course	Course Code	Paper Title	Units	Credits	Marks			
						Mid sem	End sem	Prac	Total
1	Hard core	Core - V	Mathematical Physics-II	4	6	15	60	25	100
2	Hard core	Core VI	Thermal Physics	4	6	15	60	25	100
3	Hard core	Core course-VII	Analog Systems and Applications	4	6	15	60	25	100
4	Core elective	GE-3	Generic Elective -3	4	6	15	60	25	100

5	Soft core	SECC -1	Skill Enhancement Compulsory Course-1	-	4	20	80	-	100
Semester-4									
Sl. No	Nature of Course	Course Code	Paper Title	Units	Credits	Marks			
						Mid sem	End sem	Prac	Total
1	Hard core	Core - VIII	Mathematical Physics III	4	6	15	60	25	100
2	Hard core	Core - IX	Elements of Modern Physics	4	6	15	60	25	100
3	Hard core	Core X	Digital Systems and Applications	4	6	15	60	25	100
4	Core elective	GE-4	Generic Elective -4	4	6	15	60	25	100
5	Soft core	SECC -2	Skill Enhancement Compulsory Course -2 SECC -2	-	4	20	80	-	100
Semester-5									
Sl. No	Nature of Course	Course Code	Paper Title	Units	Credits	Marks			
						Mid sem	End sem	Prac	Total
1	Hard core	Core - XI	Quantum Mechanics & Applications	4	6	15	60	25	100
2	Hard core	Core XII	Solid State Physics	4	6	15	60	25	100
3	Hard core	DSE-1	Discipline Specific Elective -1	4	6	20	80	-	100
4	Soft core	DSE-2	Discipline Specific Elective -2	4	6	20	80	-	100
Semester-6									
Sl. No	Nature of Course	Course Code	Paper Title	Units	Credits	Marks			
						Mid sem	End sem	Prac	Total
1	Hard core	Core - XIII	Electro-magnetic Theory	4	6	15	60	25	100
2	Hard core	Core XIV	Statistical Mechanics	4	6	15	60	25	100
3	Hard core	DSE-3	Discipline Specific Elective -3	4	6	20	80	-	100
4	Project	DSE-4	Discipline Specific Elective -4	-	6	-	-	-	100

Summary

	Credits	Marks
Hard core	102	1700
Core elective	24	400
Soft Core	16	400
Project	6	100
Total marks		

Summary

SEMESTER	CREDITS	TOTAL MARKS
Sem-I	22	400
Sem-II	22	400
Sem-III	28	500
Sem-IV	28	500
Sem-V	24	400
Sem-VI	24	400
TOTAL	148	2600

SEMESTER-1

Core course-I: Mathematical Physics-I

COURSE OUTCOME

The students will have understanding of:

- CO1. Understand the basic concept of Grad Div and Curl and hence verify Gauss Greens and Stroke's theorem
- CO2. Analyze first and second order differential equations, different Techniques to solve differential and integral equations
- CO3. Find the basic ideas of complex variables and verify Cauchy's integral and Residue theorem
- CO4. Understand the Fourier sine and cosine series and various special functions and important transforms and their applications

CORE PAPER-1

MATHEMATICAL PHYSICS-I

UNIT-I

Calculus -I: Plotting of functions, Intuitive ideas of continuous, differentiable functions and plotting of curves, Approximation: Taylor and binomial series (statements only), First Order Differential Equations and Integrating Factor, Second Order Differential equations: