



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

Proceeding of the meeting of the Board of Studies **Mathematics**

held on **25.04.2023** at **11:00** A.M / P.M. in the University Office.

Bhoi-Nagar, Bhubaneswar-22.

Members Present :

1. Dr. J. Patel, Retd. Prof, P.G Dept. of Math, UV, BBSR
2. Dr. Bichitra Pani, HOD, Dept. of Math, S.B. Women's College, CTC.
3. Dr. Ramakanta Mohapatra, HOD, Math, KNWC, BBSR.
4. Dr. Chhabi Rani Panigrahi, Coordinator, Math.
- 5.
- 6.
- 7.
- 8.

Prof./ Dr. **Bichitra Pani** is selected as Chairman of the Board for the Academic year 20.23.-24

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:-

B. Pani
25-4-2023
CHAIRMAN

1. **B. Pani**
25-4-2023
2. **Patel**
25/4/23
3. **Ram Mohapatra**
25.4.23
4. **Panigrahi**
25/4/23
- 5.
- 6.
- 7.
- 8.

Proceeding of Board of Studies of Department of
Mathematics held on 25.04.2023.

1. Dr. (Smt) Prichitra Pani has been selected as Chairman of the Board of Studies in Mathematics for the Academic Year 2023-24.
2. The list of Board of Conducting Examiners, Moderation Board & Paper Setters & Examiners (Practical) for the +3 Degree (Arts & Science) Examination 2023-24 in the Subject of Mathematics has been finalized & the lists in prescribed proforma are attached.
3. The Final copy of the Syllabus of the +3 Degree Examination 2023-24 in the Subject of Mathematics has been Finalized & Recommended & is attached duly signed by the Members.
4. ~~Some~~ Minor changes have been made in the Syllabus in the Page nos - 7, 16 & GEPTI which has been signed by the Members.
5. The existing question paper for Mathematics Hons & GE Courses ~~is~~ is not suitable for the subject of Mathematics & needs to be changed. ~~the~~ minimum mark for question needs to be 6 marks.

~~A Patel~~
25/4/23
(J. PATEL)

~~P. Pani~~
25.4.2023
(Dr. B. Pani)

~~Ganigrahu~~
25.4.2023
(Dr. C. R. Panigrahu)

Rasmita Mahapatra
25.4.23
(Dr. R. K. Mahapatra)



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

Proceeding of the meeting of the Board of Studies Math
held on 7/5/22 at 11.30 A.M / P.M. in the University Office,
Bhoi Nagar, Bhubaneswar-22.

Members Present :

1. Poochitra Pani
2. Ramake Mahapatra
3. Bibimbhendu Bati
- 4.
- 5.
- 6.
- 7.
- 8.

Prof./ Dr. Poochitra Pani is selected as Chairman of the
Board for the Academic year 20.22

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:-

1. Poochitra Pani 7-5-2022
2. Ramake Mahapatra
3. Bibimbhendu Bati
- 4.
- 5.
- 6.
- 7.
- 8.

Poochitra Pani
7-5-2022
CHAIRMAN



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

Proceeding of the meeting of the Board of Studies *Mathematics*
held on *14/7/21* at *11.00* A.M / P.M. in the University Office,
Bhoi Nagar, Bhubaneswar-22.

Members Present :

1. *Bonchitra Parri*
14-7-2021
2. *Ramesh Mahapatra*
14-7-21
3. *Bibimbhendu Pati*
14/7/21
- 4.
- 5.
- 6.
- 7.
- 8.

Prof./Dr. *(Smt) Bonchitra Parri* is selected as Chairman of the
Board for the Academic year 20*1-22*

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:-

1. *B. Parri*
14-7-2021
2. *Ramesh Mahapatra*
14-7-21
3. *Bibimbhendu Pati*
14/7/21
- 4.
- 5.
- 6.
- 7.
- 8.

B. Parri
14-7-2021
CHAIRMAN



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

Proceeding of the meeting of the Board of Studies in Mathematics

held on 25-8-2020 at 12 A.M / P.M. in the University Office,
Bhoi Nagar, Bhubaneswar-22.


Members Present :

1. Dr. ~~(Smt)~~ Debabala Swain, Co-ordinator, Dept of Mathematics (Ex-officio)
2. Dr. (Smt) Trupti Mohapatra, Retired Reader, R.D.W.U, BBSR
3. Dr. (Smt) Panchikā Pani, H.O.D, Mathematics, S.B. Women's (Auto) College, Cuttack
- 4.
- 5.
- 6.
- 7.
- 8.

Prof./ Dr. (Smt) Debabala Swain is selected as Chairman of the Board for the Academic year 20-21

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 25-08-2020

1. Debabala Swain 25-08-2020
2. Mohapatra 25.8.20
3. Panchikā Pani 25-8-2020
- 4.
5. Ram Mohapatra 25.8.2020
- 6.
- 7.
- 8.

The Board of Studies Meeting in Mathematics of U.P. Women's University, RRSR was held on 25.08.2020 at 11 AM in the Department of Mathematics of the University. After detailed discussions the following are recommended:

1. Dr. Debabala Swain, Co-ordinator, Mathematics & was selected as the Chairperson of the Board of Studies for the Academic Year 2020-21. (Ex-officio)
2. The name of the members of Board of Conducting Examiners, Moderation Board & Paper setters for +2 degree (Arts, Science) Examination, 2020-21 was recommended in the prescribed format.
3. The syllabus of the +2 degree Examination 2020-21 was recommended and the final copy of the syllabus signed by the members is attached.
4. The Blended learning approach for the U.G. course, Unit-2 is adopted as per Govt. Rules.
5. This 25% Guided self study made of teaching is approved herewith.

Members :-

1. Beahapatra
25.8.2020
2. Architra Pan
25.8.2020
3. Ramita Mahapatra
25.8.2020


25-08-2020
Chairman



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

Proceeding of the meeting of the Board of Studies of Mathematics

held on 27.8.19 at 11 A.M / P.M. in the University Office,
Bhoi Nagar, Bhubaneswar-22.

Members Present :

1. Dr. Mimati Samal HOD Mathematics, RDWU.
2. Dr. Ramakanta Mahapatra, HOD, Mathematics KNWC
3. Dr. (Smt) Parichitra Pani, H.O.D, Mathematics, S.B. Women's (Auto) College, Cuttack
- 4.
- 5.
- 6.
- 7.
- 8.

Prof./ Dr. Mimati Samal is selected as Chairman of the Board for the Academic year 20.19-20

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 :-

Mimati Samal
27-8-19
CHAIRMAN

1. Mimati Samal
27.8.19
2. Ramakanta Mahapatra
27-8-19
3. Parichitra Pani
27-8-19
- 4.
- 5.
- 6.
- 7.
- 8.

UG - Mathematics

RDWU UG Syllabus structure

Semester-I								
Sl. No.	Nature of Course	Course Code	Paper Title	Units	Credits	Marks		
						Mid Sem	End Sem	Total
1.	AECC	AECC-I		4	4	20	80	100
2.	CORE	C-I	Calculus-I	4	6	20	80	100
3.	CORE	C-II	Algebra-I	4	6	20	80	100
4.	GE	GE-A1	Calculus & Differential Equations	4	6	20	80	100
Total					22	80	320	400

Semester-II								
Sl. No.	Nature of Course	Course Code	Paper Title	Units	Credits	Marks		
						Mid Sem	End Sem	Total
1.	AECC	AECC-II		4	4	20	80	100
2.	CORE	C-III	Real Analysis (Analysis-I)	4	6	20	80	100
3.	CORE	C-IV	Differential equations	4	6	20	80	100
4.	GE	GE-A2	Algebra	4	6	20	80	100
Total					22	80	320	400

Semester-III								
Sl. No.	Nature of Course	Course Code	Paper Title	Units	Credits	Marks		
						Mid Sem	End Sem	Total
1.	CORE	C-V	Theory of Real functions (Analysis-II)	4	6	20	80	100
2.	CORE	C-VI	Group Theory (Algebra-II)	4	6	20	80	100
3.	CORE	C-VII	Partial differential equations and system of ODEs	4	6	20	80	100
4.	GE	GE-B1	Calculus & Differential Equations	4	6	20	80	100
5.	SEC	SEC-I		4	4	20	80	100
Total					28	100	400	500

Syllabus

Semester-IV								
Sl. No.	Nature of Course	Course Code	Paper Title	Units	Credits	Marks		
						Mid Sem	End Sem	Total
1.	CORE	C-VIII	Numerical Methods	4	6	20	80	100
2.	CORE	C-IX	Riemann Integration and Series of functions (Analysis-III)	4	6	20	80	100
3.	CORE	C-X	Ring Theory and Linear (Algebra-I)	4	6	20	80	100
4.	GE	GE-B2	Algebra	4	6	20	80	100
5.	SEC	SEC-II	Quantitative & Logical Thinking	4	4	20	80	100
	Total				28	100	400	500

Semester-V								
Sl. No.	Nature of Course	Course Code	Paper Title	Units	Credits	Marks		
						Mid Sem	End Sem	Total
1.	CORE	C-XI	Multivariate Calculus (Calculus-II)	4	6	20	80	100
2.	CORE	C-XII	Programming in C++	4	6	20	80	100
3.	DSE	DSE-I	Discrete Mathematics	4	6	20	80	100
4.	DSE	DSE-II	Number Theory	4	6	20	80	100
	Total				24	80	320	400

Semester-VI								
Sl. No.	Nature of Course	Course Code	Paper Title	Units	Credits	Marks		
						Mid Sem	End Sem	Total
1.	CORE	C-XIII	Metric Spaces and Complex analysis (Analysis-IV)	4	6	20	80	100
2.	CORE	C-XIV	Linear Programming	4	6	20	80	100
3.	DSE	DSE-III	Differential Geometry	4	6	20	80	100
4.	DSE	DSE-IV	Project/Probability & Statistics	4	6	20	80	100
	Total				24	80	320	400

Summary

CORE	14 × 100	1400
Generic Elective (GE)	4 × 100	400
Skill Enhancement Course (SEC)	2 × 100	200
Discipline Specific Elective (DSE)	4 × 100	400
Ability Enhancement Compulsory Course (AECC)	2 × 100	200
Total Marks		2600

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-I

Core Course: Calculus-I (C-I)

Course Outcomes:

On completion of the course, a student will be able to

- Calculate the higher order derivatives and limits in indeterminate form by repeated use of L'Hospital rule.
- acquire the concept of asymptotes and envelopes;
- determine concavity and convexity of a function from its graph and from its second derivative;
- explain the properties of two and three dimensional shapes and trace a curve.
- solve first order ordinary differential equations utilizing the standard techniques for separable, exact, linear, homogeneous or Bernoulli cases.

UNIT-I

Hyperbolic functions, higher order derivatives, Leibnitz rule and its applications to problems of the type $e^{ax+b} \sin x$, $e^{ax+b} \cos x$, $(ax + b)^n \sin x$, $(ax + b)^n \cos x$, curvature, asymptotes, curve tracing in Cartesian coordinates, tracing in polar coordinates of standard curves, L'Hospitals rule.