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RAMA DEVI WOMEN'S UNIVERSITY, BHUBANESWAR

Proceeding of the meeting of the Board of Studies in Biotechnology held on 16.04.2019 at 01.00 P.M. in the University Office, Bhoinagar, Bhubaneswar-22.

Members Present :

1. Dr. Sasmita Mohanty, Chairperson
2. Dr. Raj Kumar Joshi, Member
3. Dr. Sujata Mohanty, Member
4. Dr. Sanjay Kumar Raul, Member
5. Dr. Tilottama Bhatra, Member
6. Dr. Dillip Kumar Bisht, Member
7.
8. Dr. Bidyut Prava Das, Member
9.
10.
11.

O/– The recommendations of the Board in respect of the +3 Degree Regulations, Detailed Common Syllabus, Text Books and other items for +3 Degree Course are appended with the prescribed form effective from the year 2019-20.

Signature of the Members :-

S Mohanty 16/4/19
CHAIRMAN

1.
2. Rajkumar Joshi 16.4.19
3. Dillip Kumar Bisht 16.04.19
4. Sanjay Kumar Raul 16/4/19
5. Tilottama Bhatra 16.04.19
6. Sujata Mohanty 16/4/19
7.
8. Bidyut Prava Das 16.4.19 Dr Vijay 16.4.19
9.
10.

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Proceedings of the meeting of Board of Studies of PG Dept. of Biotechnology, Rama Devi Women's University held on 28th August 2019 in the University Office, Bhoinagar, Bhubaneswar-22.

Members present:

1. Prof. Sasmita Mohanty
2. Dr. Bidyut Prava Dash
3. Dr. Raj Kumar Joshi
4. Dr. Sujata Mohanty
5. Dr. Dillip Kumar Bishi
6. Dr. Sanjay Kumar Raul
7. Dr. Tilothama Bhotra
8. Dr. Monalisa Mohanty

- At the outset of the meeting, the board unanimously selected Prof. Sasmita Mohanty, Professor of the PG Dept. of Biotechnology, RDWU as the Chairman of the Board.
- The board unanimously recommended the name for Board of conducting examiners, moderation board and paper setters for +3 Biotechnology (CBCS) 1st semester (Reg. & Back for old and new course), 2nd semester (Reg. & Back for old and new course), 3rd semester(Reg. & Back), 4th semester (Reg. & Back), 5th Semester (Reg. & Back), 6th semester (Reg. & Back), 7th semester (Reg. & Back), and 8th semester (Reg. & Back) examination for the academic year 2019-20.
- The board unanimously recommended the name for Board of conducting examiners, moderation board, paper setters and examiners for M. Sc Biotechnology (CBCS) 1st semester (Reg. & Back), 2nd semester (Reg. & Back), 3rd semester (Reg. & Back), and 4th semester (Reg. & Back) examination for the academic year 2019-20.
- The board unanimously recommended the name for Board of conducting examiners, moderation board, paper setters and examiners for M. Phil Biotechnology (CBCS) 1st semester (Reg. & Back), 2nd semester (Reg. & Back) examination for the academic year 2019-20.
- The board recommended that the question papers are to be set unit-wise for Regular and Back for onward examinations in 2019-20 for B.Sc Biotechnology, M.Sc Biotechnology and M.Phil Biotechnology Courses.
- Among other matters, the Board unanimously recommended the modification of existing M.Sc Biotechnology course structure which subject to approval would be applicable from the year 2020-21. The details of the modified course is attached herewith for necessary approval.

RAMA DEVI WOMEN's UNIVERSITY
VIDYA VIHAR, BHUBANESWAR

Proceeding of the meeting of the Board of Studies in Biotechnology held on 14.07.2021 at 3 PM in the Dept. of Biotechnology, Rama Devi Women's University, Vidya Vihar, Bhoinagar, Bhubaneswar-22.

The following members were present:

1. Dr Raj Kumar Joshi, HOD
2. Prof. J. Dandapat, External Member
3. Prof. Sasmita Mohanty, Internal Member
4. Dr. Sujata Mohanty, Internal Member
5. Dr. Sanjay Kumar Raul, Internal Member
6. Dr. Monalisa Mohanty, Internal Member
7. Dr. Tilothama Bhotra, Internal Member

Dr. Dillip Kumar Bishi could not attend the meeting as he is on mandatory medical leave after contracting COVID19. Prof. J. Dandapat, external member of the BOS requested to attend the meeting through video conferencing and his request was accepted.

At the outset of the meeting, Prof. Sasmita Mohanty, the senior most faculty member, PG Dept. of Biotechnology, RDWU was formally selected as the Chairperson of the Board of Studies in Biotechnology 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 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 (Biotechnology), PG (Biotechnology) and PhD (Biotechnology) for regular and back examinations 2020-21 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 2021-22 for B.Sc Biotechnology and M.Sc Biotechnology courses as well as PhD Biotechnology course work papers.
3. It was unanimously decided by all the members present to recommend the existing CBCS course pattern of B.Sc Biotechnology for the Regular, Back and for onward examinations in 2021-22.

4. For UG course in Biotechnology, the Board unanimously 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. However, for PG course in Biotechnology, the Board recommended that the last unit of each paper should be ear-marked for student's self-study. Nevertheless, the board unanimously agreed that faculty members must ensure the completion of all modules of a paper.
5. The board unanimously recommended the existing course syllabus of M.Sc Biotechnology for the Regular, Back and for onward examinations in 2021-22.
6. The board discussed the newly developed course syllabus of PhD Biotechnology. Based on thorough evaluation and necessary feedbacks from the members, the board unanimously recommended the PhD Biotechnology course work syllabus which subject to approval would be applicable for the 2021-22 academic year. The new course work syllabus has been designed as per recommendation of UGC regulations 2016. The course work will have 4 papers of a total of 16 credits including the common paper of Research methodology and Computer application (4 credits) and Research and Publication ethics (4 credits). The details of the modified course is enclosed and may be placed for necessary approval.
7. 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 of the department of Biotechnology.

The meeting ended with a vote of thanks to the Chair.

14.07.21
Dr. Tilothama Bhotra
Internal Member

14.7.21
Dr. Monalisa Mohanty
Internal Member

14/07/21
Dr. Sanjay Kumar Raul
Internal Member

14.7.21
Dr. Sujata Mohanty
Internal Member

14.7.21
Prof. J. Dandapat
External Member

14/07/21
Dr Raj Kumar Joshi
HOD

14/7/21
Prof. Sasmita Mohanty
Chairperson

RAMA DEVI WOMEN's UNIVERSITY
VIDYA VIHAR, BHUBANESWAR

Proceeding of the meeting of the Board of Studies in Biotechnology held on 18.05.2022 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, HOD
2. Prof. J. Dandapat, External Member
3. Prof. Sasmita Mohanty, Internal Member
4. Dr. Sujata Mohanty, Internal Member
5. Dr. Sanjay Kumar Raul, Internal Member
6. Dr. Dillip Kumar Bishi, Internal Member
7. Dr. Monalisa Mohanty, Internal Member
8. Dr. Tilothama Bhotra, Internal Member

At the outset of the meeting, Prof. Sasmita Mohanty, the senior most faculty member, PG Dept. of Biotechnology, RDWU was formally selected as the Chairperson of the Board of Studies in Biotechnology 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 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 (Biotechnology), PG (Biotechnology) and PhD (Biotechnology) for regular and back examinations 2022-23 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 2022-23 for B.Sc Biotechnology and M.Sc Biotechnology courses as well as PhD Biotechnology course work papers.
3. It was unanimously decided by all the members present to recommend the existing CBCS course pattern of B.Sc Biotechnology for the Regular, Back and for onward examinations in 2022-23.
4. For UG course in Biotechnology, the Board unanimously 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. However, for PG course in Biotechnology, the Board recommended that the last unit of each paper should be ear-marked for student's

self-study. Nevertheless, the board unanimously agreed that faculty members must ensure the completion of all modules of a paper.

5. The board unanimously recommended the modification in the M.Sc Biotechnology course to be implemented from the academic session 2022-23. Specific objectives and outcomes were incorporated to each paper. Each paper have 5 units with each unit having 3 subunits. Additionally, two new papers- AC-101 (Computer Fundamentals & Applications) in the 1st semester and AC-401 (Women and Society) in the 4th semester was added in the PG syllabus each with 3 credit and 50 marks. The syllabus for this have been designed and approved by separate boards for universal implementation at the University level. BT-305 (Research Methodology and Scientific Communications Skill) was upgraded into a 4 credit paper. Also, BT 402 (Dissertation) was reassigned with 16 credits with a total of ~~500~~ 450 marks.

6. The board deliberated on the development of a new skill based certificate course "Molecular Techniques for Integrative Research" to be offered by the dept. of Biotechnology. This course shall have 3 modules for a total of 42 hours. The course will offered to all PG students of the University during 2nd/3rd semester as a non-credit skill based certificate course. It will have an integrated approach of 21 hours of theory classes and 21 hours of practical sessions. It will be regulated by the rules and regulations for the conduct of skill based certificate courses at Rama Devi Women's University, Bhubaneswar. The board unanimously recommended the course syllabus (Annexure-II) and suggested the implementation of the course from the academic session 2022-23.

7. The board also recommended that additional external experts may be invited to be the members of the BOS in Biotechnology at RDWU.

8. 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 of the department of Biotechnology.

The meeting ended with a vote of thanks to the Chair.

Dr. Tilothama Bhotra
Internal Member

Dr. Monalisa Mohanty
Internal Member

Dr. Sanjay Kumar Raul
Internal Member

Dr. Sujata Mohanty
Internal Member

Prof. J. Dandapat
External Member

Dr Raj Kumar Joshi
HOD

Dr Dillip K. Bishi
External Member

Prof. Sasmita Mohanty
Chairperson

Skill based certificate course
on
MOLECULAR TECHNIQUES FOR INTEGRATIVE RESEARCH

1. Name of Department offering SBCC: Dept. of Biotechnology, RDWU
2. Title of SBCC : Molecular Techniques For Integrative Research
3. SBCC Code : BT/SBC/MTIR
4. Semester for offering : 2nd or 3rd.
5. Applicable to Class : PG Only
6. Duration : 42 Hours (Theory-20 hours; Practice-20 hours)
7. Time : 09:00 AM- 10:00 AM/ 4:00 PM-5:00 PM
8. Weekdays : variable

SYLLABUS STRUCTURE

Course code: BT/SBC/MTIR
Course title: MOLECULAR TECHNIQUES FOR INTEGRATIVE RESEARCH

Credits: 03	Full marks: 50	Total hours: 42

Course description:
The course is designed to help master level students from different domains (botany/zoology/biotechnology/genomics/physics/chemistry) to learn about different types of molecular techniques as required for Trans-disciplinary research. This course will make the students familiar with the techniques employed in molecular biology, experiments involved using different techniques and the use of instruments in these techniques.

Course objectives:

1. The objective of the course is to provide a theoretical and practical introduction into various molecular techniques.
2. Students will be trained in working with molecular laboratory equipment and biological solutions for molecular research.
3. Students will be emphasized on planning, presentation and critical evaluation of laboratory results.

Learning outcomes:
On completion of the course, the students will have the following learning outcomes:

1. Can explain the basic methods of molecular techniques.
2. Plan experimental work based on a protocol.
3. Explain and interprete experimental data.
4. Independently handle basic molecular equipments.
5. can used web-based data resources for bio molecular analyses.

MODULE 1:

Bioanalytics- Chromatographic & Spectroscopic techniques (3 hours)
Practical demonstration on chromatography and UV-Vis spectroscopy (3 hours)

Microscopic techniques- SEM, TEM, AFM & Confocal microscopy (3 hours)
Practical demonstration on phase-contrast & inverted microscopy (3 hours)

MODULE 2:

Biochemical techniques: Biomolecules estimation methods, protein purification assays, protein sequencing (3 hours)
Practical demonstration on protein estimation & purification (3 hours)

Immunological Techniques: Immunoelectrophoresis, Immunodiffusion, Double Diffusion, Western blotting (3 Hours)
Practical demonstration on Elisa & Immuno-blotting system (3 Hours)

Nano Techniques: Nanoparticles as biosensors, nanomedicine in therapeutics, nanomaterials for tissue engineering (3 Hours)
Practical demonstration on preparation of nanoparticles/nanofibres (3 hours)

MODULE 3:

Recombinant-DNA Techniques: Isolation of DNA & RNA, Electrophoresis & PCR, gene cloning, bacterial transformation (3 hours)
Practical demonstration on isolation of DNA/RNA, PCR and gene cloning (3 Hours)

Bioinformatics: DNA Sequencing, tools for DNA sequence assembly, gene prediction and functional annotation (3 Hours)
Practical demonstration on application of tools for identification, characterization and functional annotation of gene(s) & proteins (3 Hours)