

Ramakrishna Mission Residential College (Autonomous)

Narendrapur

Vivekananda Centre for Research

Syllabus for Course Work

Programme Name : PhD in Chemistry

Programme Code : PDCHE

Introduced from 1 October 2015

Duration : 2 Semesters

Credit : 16

Full marks : 200

Semester 1
Course 1
Course Name :
Course Code : PDCHERM
Credit : 4

Full Marks : 50
Teaching-learning Hours : 24 Hours

Module 1 : Marks – 20 (10+10)

- Definition of Scientific Research
- History of Researches in Chemistry and Chemical Sciences

Module 2 : Marks Research Methodology in Chemistry – 30 (10+20)

- Different Methods of Researches in Chemistry
- *Computational Approaches in Research (Revised / added from July 2018)*

Semester 1
Course 2
Course Name : Research Ethics
Course Code : PDCHERE
Credit : 4

Full Marks : 50
Teaching-learning Hours : 24 Hours

Module 1 : Marks – 20 (10+10)

- What is Research Ethics
- Parameters of Research Ethics

Module 2 : Marks – 30 (10+20)

(Revised / added from July 2018)

- *Tools to maintain research Ethics*
- *Statutory Guidelines*

Semester 2
Course 3
Course Name : Advanced Level Research Course 1
Course Code : PDCHEALRC1
Credit : 4
Full Marks : 50
Teaching-learning Hours : 24 Hours

The details syllabus will be fixed on the special area chosen by the research scholar for his PhD studies. This will be an advanced course, i.e. post-M.Sc./M.Tech. level course. This course may be theoretical or experimental in nature and may have both the components. Research Supervisor and the concerned Research Advisory Committee will finalise the details of the course. This will not be a course as taught in post graduate classes ; rather it will assist the scholar in exploring his area of research in a more accurate and deeper way. The assessment of the course may be done in any innovative methods, such as presentation, term paper writing, special experimentation and its analysis etc.

Semester 2
Course 3
Course Name : Advanced Level Research Course 2
Course Code : PDCHEALRC2
Credit : 4
Full Marks : 50
Teaching-learning Hours : 24 Hours

The details syllabus will be fixed on the special area chosen by the research scholar for his PhD studies. This will be an advanced course, i.e. post-M.Sc./M.Tech. level course. This course may be theoretical or experimental in nature and may have both the components. Research Supervisor and the concerned Research Advisory Committee will finalise the details of the course. This will not be a course as taught in post graduate classes ; rather it will assist the scholar in exploring his area of research in a more accurate and deeper way. The assessment of the course may be done in any innovative methods, such as presentation, term paper writing, special experimentation and its analysis etc.

Ramakrishna Mission Residential College (Autonomous)

Narendrapur

Vivekananda Centre for Research

Syllabus for Course Work

Programme Name : PhD in Computer Science

Programme Code : PDCOM

Introduced from 1 August 2019

Duration : 2 Semesters

Credit : 16

Full marks : 200

Semester 1

Course 1

Course Name : Research Methodology in Computer Science

Course Code : PDCOMRM

Credit : 4

Full Marks : 50

Teaching-learning Hours : 24 Hours

Module 1 : Marks – 20 (10+10)

- Definition of Scientific Research
- History of Researches in Computational Sciences

Module 2 : Marks – 30 (10+20)

- Different Methods of Researches in Computer Science

Semester 1

Course 2

Course Name : Research Ethics

Course Code :

Credit : PDCOMRE 4

Full Marks : 50

Teaching-learning Hours : 24 Hours

Module 1 : Marks – 20 (10+10)

- What is Research Ethics
- Parameters of Research Ethics

Module 2 : Marks – 30 (10+20)

- Tools to maintain research Ethics
- Statutory Guidelines

Semester 2
Course 3
Course Name : Advanced Level Research Course 1
Course Code : PDCOMALRC1
Credit : 4
Full Marks : 50

Teaching-learning Hours : 24 Hours

The details syllabus will be fixed on the special area chosen by the research scholar for his PhD studies. This will be an advanced course, i.e. post-M.Sc./M.Tech. level course.

This course may be theoretical or experimental in nature and may have both the components. Research Supervisor and the concerned Research Advisory Committee will finalise the details of the course. This will not be a course as taught in post graduate classes ; rather it will assist the scholar in exploring his area of research in a more accurate and deeper way. The assessment of the course may be done in any innovative methods, such as presentation, term paper writing, special experimentation and its analysis etc.

Semester 2
Course 3
Course Name :
Course Code : PDCOMALRC2 Advanced Level Research Course 2
Credit : 4
Full Marks : 50

Teaching-learning Hours : 24 Hours

The details syllabus will be fixed on the special area chosen by the research scholar for his PhD studies. This will be an advanced course, i.e. post-M.Sc./M.Tech. level course.

This course may be theoretical or experimental in nature and may have both the components. Research Supervisor and the concerned Research Advisory Committee will finalise the details of the course. This will not be a course as taught in post graduate classes ; rather it will assist the scholar in exploring his area of research in a more accurate and deeper way. The assessment of the course may be done in any innovative methods, such as presentation, term paper writing, special experimentation and its analysis etc.

Ramakrishna Mission Residential College (Autonomous)

Narendrapur

Vivekananda Centre for Research

Syllabus for Course Work

Programme Name : PhD in Physics

Programme Code : PDPHY

Introduced from 1 October 2015

Duration : 2 Semesters

Credit : 16

Full marks : 200

Semester 1
Course 1
Course Name : Research Methodology in Physics
Course Code : PDPHYRM
Credit : 4
Full Marks : 50
Teaching-learning Hours : 24 Hours

Module 1 : Marks – 20 (10+10)

- Definition of Scientific Research
- History of Researches in Physics and Physical Sciences

Module 2 : Marks – 30 (10+20)

- Different Methods of Researches in Physics
- *Computational Approaches in Research (Revised / added from July 2018)*

Semester 1
Course 2
Course Name : Research Ethics
Course Code : PDPHYRE
Credit : 4
Full Marks : 50
Teaching-learning Hours : 24 Hours

Module 1 : Marks – 20 (10+10)

- What is Research Ethics
- Parameters of Research Ethics

Module 2 : Marks – 30 (10+20)

(Revised / added from July 2018)

- *Tools to maintain research Ethics*
- *Statutory Guidelines*

Semester 2
Course 3
Course Name : Advanced Level Research Course 1
Course Code : PDPHYALRC1
Credit : 4
Full Marks : 50
Teaching-learning Hours : 24 Hours

The details syllabus will be fixed on the special area chosen by the research scholar for his PhD studies. This will be an advanced course, i.e. post-M.Sc./M.Tech. level course. This course may be theoretical or experimental in nature and may have both the components. Research Supervisor and the concerned Research Advisory Committee will finalise the details of the course. This will not be a course as taught in post graduate classes ; rather it will assist the scholar in exploring his area of research in a more accurate and deeper way. The assessment of the course may be done in any innovative methods, such as presentation, term paper writing, special experimentation and its analysis etc.

Semester 2
Course 3
Course Name : Advanced Level Research Course 2
Course Code : PDPHYALRC2
Credit : 4
Full Marks : 50
Teaching-learning Hours : 24 Hours

The details syllabus will be fixed on the special area chosen by the research scholar for his PhD studies. This will be an advanced course, i.e. post-M.Sc./M.Tech. level course. This course may be theoretical or experimental in nature and may have both the components. Research Supervisor and the concerned Research Advisory Committee will finalise the details of the course. This will not be a course as taught in post graduate classes ; rather it will assist the scholar in exploring his area of research in a more accurate and deeper way. The assessment of the course may be done in any innovative methods, such as presentation, term paper writing, special experimentation and its analysis etc.

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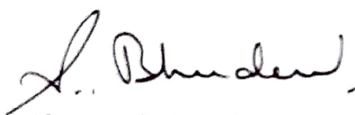
Narendrapur, Kolkata - 700103, West Bengal, India

Research Committee Meeting Notice

No.: 2015-16/01

Date:19.11.2015

A meeting of the Research Committee under the Vivekananda Centre for Research will be held on 02.12.2015 at 2 p.m. at the Conference Room of the College to discuss the following agenda. All concerned are requested to remain present.



(Swami Bhudevananda)

Principal (Actg.)
Ramakrishna Mission Residential College
(Autonomous)
Narendrapur, Kolkata - 700 103. W.B.

Agenda:

1. Welcoming Members and apprising them on the modalities of the Committee
2. Formation of the Research Advisory Committee for the Departments of Physics and Chemistry
3. Approval of the List of Supervisors under VCR
4. An Outline of the Activities
5. Adoption of the Research Policy and Consultancy Policy
6. Syllabi of the Course Work
7. Miscellaneous

2. Bhudan
Kishinanti

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4. Shash

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6. Parman

7. Sekhar Ray

8. Prasanthi Shash

9. Malay Perikait

**Proceedings of the Research Committee Meeting under the Vivekananda Centre for
Research held on 2.12.2015 at 2 p.m. at the Conference Room of the College**

1. Welcoming Members and apprising them on the modalities of the Committee

Principal welcomed the members of the newly constituted Research Committee under VCR and apprised them about the activities and SoPs of RC-VCR. He further informed that the University of Calcutta has accorded affiliation to this Centre. He mentioned that as the faculty members of Physics and Chemistry Departments are already registered as PhD Supervisors in different universities, hence we will start our PhD programmes with these Departments.

2. The Principal proposed that separate Research Advisory Committees for the Departments of Physics and Chemistry be formed as per the PhD regulations framed by the University of Calcutta for this college. He placed the names of the members of the RAC-Physics and RAC-Chemistry.

Members approved the RACs and forwarded it to the Academic Council for final approval.

3. Approval of the List of Supervisors under VCR

Vice Principal presented the list of the Supervisors of the Departments of Physics and Chemistry as per the UGC guidelines and University of Calcutta directives. They are :

- i. Dr. Prasanta Ghosh, Ph.D., Associate Professor in Department of Chemistry.
- ii. Dr. Malay Purkait, Ph.D., Associate Professor in Department of Physics.

The RC-VCR approved the list of the Supervisors and requested the Principal to issue letter of intimation to them as the Supervisors.

4. An Outline of the Activities

It was proposed that apart from the offering Ph.D. programmes, the VCR should try to encourage the faculties to take up path breaking research projects. While they will be allowed to apply for the Government Projects, a seed money from the institution should also be given to them based on their application. Initially, Principal will approve these proposals.

5. Adoption of the Research Policy and Consultancy Policy

Vice Principal presented the Research Policy along with the Research Ethics Policy and also the Instructional Consultancy Policy.

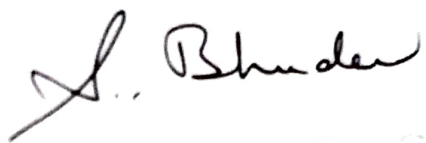
Members of the RC-VCR discussed on the policy and approved it for uploading on the

college web site.

6. Syllabi of the Course Work

Vice Principal presented the Ph.D. Course Work syllabi and after discussion, it was resolved these be introduced initially for the Ph.D. Programmes in Physics and Chemistry.

7. Miscellaneous : Nothing specific came.



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Ramakrishna Mission Residential College(Autonomous)


Narendrapur, Kolkata - 700103, West Bengal, India

Research Committee Meeting Notice

No.: 2016-17/01

Date:06.08.2016

A meeting of the Research Committee under the Vivekananda Centre for Research will be held on 08.08.2016 at 3 p.m. at the Conference Room of the College to discuss the following agenda. All concerned are requested to remain present.


(Swami Bhudevananda)

Principal (Actg.)
Ramakrishna Mission Residential College
(Autonomous)
Narendrapur, Kolkata - 700 103, W.B.

Agenda:

1. Confirmation of the Proceedings of the last meeting held on 10.09.2015
2. Action Taken Report
3. Approval of the List of Supervisors under VCR
4. Report of the Activities
5. Miscellaneous

S. Bhuden,

Krishnamurti

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Sekhar Ray

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Prasanthi Josh

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Malay Purkari

**Proceedings of the Research Committee Meeting under the Vivekananda Centre for
Research held on 08.08.2016 at 3 p.m. at the Conference Room of the College**

1. Confirmation of the Proceedings of the last meeting held on 02.12.2015

Proceedings of the last meeting were read and confirmed.

2. Action Taken Report

- RACs have been approved by the AC.
- Letter of Intimation was issued to the Supervisors.
- Seed money has been provided to Dr Prasanta Ghosh based on his application.

3. Approval of the List of Supervisors under VCR

Vice Principal presented the list of the Supervisors of the Departments of Physics as per the UGC guidelines and University of Calcutta directives. He is :

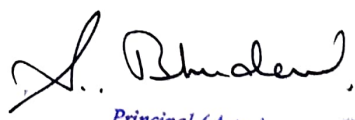
- i. Dr. Sourav Chattopadhyay, Ph.D., Associate Professor in Department of Physics and Computer Science (Specialized in Electronics).

The RC-VCR approved the list of the Supervisors and requested the Principal to issue letter of intimation to them as the Supervisors.

4. Report of the Activities :

Prof P Ghosh, Prof M Purkait and Prof S Chattopadhyay have been able to get research project funded by DST, CSIR etc.

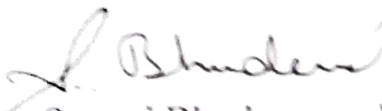
5. Miscellaneous : A Separate Research wing is required to be set up and infrastructure is needed to be upgraded for bench mark research activities.


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Ramakrishna Mission Residential College (Autonomous)
Narendrapur, Kolkata - 700103, West Bengal, India

Research Committee Meeting Notice
No.: 2017-18/01
Date: 04.01.2018

A meeting of the Research Committee under the Vivekananda Centre for Research will be held on 09.01.2018 at 3 p.m. at the Conference Room of the College to discuss the following agenda. All concerned are requested to remain present.


(Swami Bhudevananda)
Principal (Actg.)
Principal (Actg.)
Ramakrishna Mission Residential College
Narendrapur, Kolkata - 700 103. W.B.

Agenda:

1. Confirmation of the Proceedings of the last meeting held on 08.08.2016
2. Action Taken Report
3. Approval of the List of Supervisors under VCR
4. Report of the Activities
5. Revision in the Course Work Syllabi
6. Miscellaneous

S. Bhuden,
Kuchinanti

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Shankar

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Sekhar Ray

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Prasanti Shosh

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Malay Purikant

**Proceedings of the Research Committee Meeting under the Vivekananda Centre for
Research held on 09.01.2018 at 3 p.m. at the Conference Room of the College**

1. Confirmation of the Proceedings of the last meeting held on 08.08.2016

Proceedings of the last meeting were read and confirmed.

2. Action Taken Report

- Letter of Intimation as Supervisor was sent to Dr Sourav Chattopadhyay.
- Seed Money was again provided to Dr Prasanta Ghosh of Chemistry department.

3. Approval of the List of Supervisors under VCR

Vice Principal presented the list of the Supervisors as per the UGC guidelines and University of Calcutta directives. They are :

- i. Dr Joykrishna Maity, Assistant Professor, Department of Chemistry
- ii. Dr Indrajit Saha, Assistant Professor, Department of Chemistry

The RC-VCR approved the list of the Supervisors and requested the Principal to issue letter of intimation to them as the Supervisors.

4. Report of the Activities

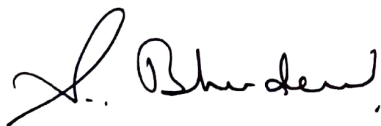
- Projects are being continued by Prof P Ghosh, Prof M Purkait and Prof S Chattopadhyay
- A Patent is going to be filed by Dr P Ghosh.
- Infrastructural renovation is being planned in a large scale.

5. Revision in the Course Work Syllabi

A New module under the title 'Research Ethics' has been incorporated in all the Course Work syllabi.

The RC-VCR approved the revision.

6. Miscellaneous : Nothing specific came up.


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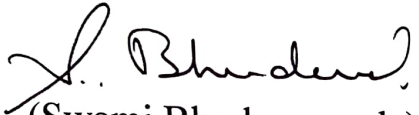
Narendrapur, Kolkata - 700103, West Bengal, India

Research Committee Meeting Notice

No.: 2018-19/01

Date:09.09.2018

A meeting of the Research Committee under the Vivekananda Centre for Research will be held on 14.09.2018 at 3 p.m. at the Conference Room of the College to discuss the following agenda. All concerned are requested to remain present.


(Swami Bhudevananda)
Principal (Actg.)
Ramakrishna Mission Residential College
(Autonomous)
Narendrapur, Kolkata - 700 103. W.B.

Agenda:

1. Confirmation of the Proceedings of the last meeting held on 09.01.2018
2. Action Taken Report
3. Approval of the List of Supervisors under VCR
4. Report of the Activities
5. Introduction of the PhD in Computer Science
6. Miscellaneous

S. Bhuden,

Krishnamurti

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~~Sub~~

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~~Anu~~

7. Anura

8. Sekhar Ray

9. Praxanthi Syam

10. Malay Purkait

Proceedings of the Research Committee Meeting under the Vivekananda Centre for Research held on 14.09.2018 at 3 p.m. at the Conference Room of the College

1. Confirmation of the Proceedings of the last meeting held on 09.01.2018

Proceedings of the last meeting were read and confirmed.

2. Action Taken Report

- Letter of Intimation has been sent to the Supervisors.
- Patent has been filed by Dr P Ghosh.
- The entire Research wing under VCR will be shifted to the new building.

3. Introduction of the PhD in Computer Science

Members of the RC-VCR discussed on the possibilities to introduce Ph.D. in Computer Science. After detailed discussion it was decided that Ph.D. programme in Computer Science may be introduced and the suitable Body of the college may be approached in this regard.

Course Work Syllabi of Ph.D. in Computer Science Programme has also been approved.

4. Approval of the List of Supervisors under VCR

Vice Principal presented the name of the Supervisor as par the UGC guidelines and University of Calcutta directives. He is :

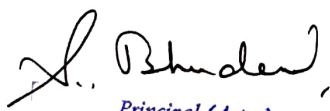
- i. Dr. Siddhartha Banerjee, Assistant Professor, Department of Computer Science

The RC-VCR approved the name of the Supervisor and requested the Principal to issue letter of intimation to him as the Supervisor.

5. Report of the Activities :

- Prof P Ghosh has been provided with the Seed Money once again.
- He is going to submit another patent.
- New equipment will be procured out of the DST-FIST funding if available.

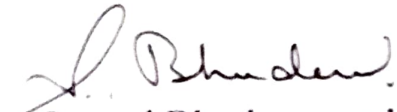
6. Miscellaneous : Nothing specific came up.


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Ramakrishna Mission Residential College (Autonomous)
Narendrapur, Kolkata - 700103, West Bengal, India

Research Committee Meeting Notice
No.: 2019-20/01
Date: 02.08.2019

A meeting of the Research Committee under the Vivekananda Centre for Research will be held on 09.08.2019 at 2 p.m. at the Conference Room of the College to discuss the following agenda. All concerned are requested to remain present.


(Swami Bhudevananda)
Principal (Actg.)
Ramakrishna Mission Residential College
Principal (Actg.)
Narendrapur, Kolkata - 700 103, W.B.

Agenda:

1. Confirmation of the Proceedings of the last meeting held on 14.09.2018
2. Action Taken Report
3. Report of the Activities
4. Miscellaneous

2. Bhudam,
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8. Sekhar Ray

9. Prasant Ghosh

10. Malay Purkait

Proceedings of the Research Committee Meeting under the Vivekananda Centre for Research held on 09.08.2019 at 2 p.m. at the Conference Room of the College

1. Confirmation of the Proceedings of the last meeting held on 14.09.2018
Proceedings of the last meeting were read and confirmed.
2. Action Taken Report
 - Letter of Intimation has been sent to the Supervisor.
 - Another patent has been submitted by Dr P Ghosh.
3. Report of the Activities
 - New Research projects have been appealed by our faculty members to CSIR and DST.
 - Seed Money, as requested by Dr P Ghosh has been provided.
 - VCR is thinking of publishing some original research-oriented books.
4. Miscellaneous :
 - Some Research level Galleries and/or archives and/or Displays may be arranged by the college.



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