



BHARATIYA VIDYA BHAVAN'S
Bhavan's College

ANDHERI (WEST)

(AUTONOMOUS)

NAAC- "A" GRADE (Valid Till 2025)

16/12/2021

RESEARCH AND DEVELOPMENT CELL (R&DC)-

POLICY DOCUMENT

Objectives

- Ensuring and monitoring research of staff and students
- supervising the processing of proposals sent to various funding bodies
- Ensuring the smooth conduct of admission for Ph.D program.

Committee members

Principal	Prof (Dr) Z.P. Bhathena (PhD)
Convenor	Prof (Dr) Nitin M. Labhane (PhD, PDF-Hungary)
Members	Dr SV Raut Dr BM Gore Dr. Rounak Atram, Dr Sunil Gondhali, Mrs Janvi Bhatia

Principal of the College will be de-facto Chairman of the meeting convened by the Convenor for resolving matters related to research and development.

RESEARCH POLICY OF BHAVAN'S COLLEGE

Research basically is a work of passion. It involves a dedicated 24X7 thought process focused on the agenda or plan of work. It initiates first with *a thought an idea* which needs to be substantiated with facts and data. This is an interesting but a mammoth task requiring infrastructure facilities and funding support. Bhavan's College recognizes the potential of its staff and students and hopes to motivate them through a well thought out research policy relevant within the existing work scenario. Recognizing the changing context of the scientific enterprise, and the needs of globalization, we enunciate the following objectives for its research Policy-

- To provide necessary autonomy and freedom of functioning for all academic staff and student, so that an ambience for truly creative work is encouraged, while ensuring at the same time that the science and technology enterprise is fully committed to its social responsibilities and commitments
- To integrate scientific knowledge with insights from other disciplines, and ensure fullest involvement of scientists and technologists in all streams so that the spirit and methods of scientific enquiry permeate deeply into all areas of education



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- To attract the brightest young minds to careers in science and technology, by conveying a sense of excitement concerning the advancing frontiers, and by creating suitable employment opportunities for them.
- To build and maintain centers of excellence in active collaboration with industries, with the aim to raise the level of work in selected areas to the highest international standards
- To establish an Intellectual Property Rights (IPR) regime, which maximizes the incentives for the generation and protection of intellectual property by all types of inventors.
- No research student will be discriminated based on caste, creed, region, religion etc. The policy of reservation as mentioned by the University of Mumbai vide letter dated 29th June 2013 (Uni. Of Mumbai letter No.Spl.Cell/Admn/PG/4/2013) will be followed in letter and spirit.
- Principal of the College will be de-facto chairman of the meeting convened by the Convenor of the meeting.
- The RCMC committee will be constituted with representations of least one member from the arts, Commerce and Science faculty.

STRATEGY AND IMPLEMENTATION PLAN

Keeping in view these broad objectives, it is essential to spell out an implementation strategy that will enable identification of specific plans, programmes and projects, with clearly defined tasks, estimates of necessary resources, and time targets. Some of the key elements of the implementation strategy will be as follows:

FUNDING

Being an academic institute involved mainly with UG teaching, funds are limited. Thus external funding resource must be actively sought after. It would be prudent on the staff to see that 50% of all their research activity per year gets funded. This will alleviate the college burden of finance for research. Research funding by the Government of India comes from a number of sources. For basic science and technology research, these include the Council for Scientific and Industrial Research (CSIR), Department of Science and Technology (DST), and University Grants Commission (UGC). For applied research, these include the CSIR, DBT and Science and Engineering Research Council (SERC). Other funding authorities are the Defense Research Development Organization (DRDO), the Indian Council of Agricultural Research (ICAR), the Indian Space Research Organization (ISRO), the Department of Ocean Development (DOD), the Indian Council for Social Science Research (ICSSR), and the Ministry of Environment and Forests (MEF) etc.

OPTIMAL UTILIZATION OF EXISTING INFRASTRUCTURE AND COMPETENCE



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Science and technology is advancing at a very fast pace, and obsolescence of physical infrastructure, as also of skills and competence, take place rapidly. Steps should be taken to network the existing infrastructure, investments and intellectual strengths, wherever they exist, to achieve effective and optimal utilization, and constantly upgrade them to meet changing needs. This can be undertaken through procurement of high grade equipment's from major research projects sanctioned by Govt that can be placed for common utilization under a staff in charge. Creation of a common instrumentation room for this end should be sought. Additionally, the Govt provides 75% reduction in the charges for analysis at certain centers like SAIF, IIT and that should be availed

STRENGTHENING OF THE INFRASTRUCTURE

UGC supports creation of "colleges of excellence" and gives grants for rebuilding infrastructure and Bhavan's College should be selected for special support to raise the standard of teaching and research.

HUMAN RESOURCE DEVELOPMENT

Bhavan's College as a part of their annual function must hold a scientific meet wherein schemes for continuing education and training of university and college teachers in contemporary research techniques and in emerging areas of science be strengthened and new innovative programs started. Active support for training abroad wrt financial aid should be provided so to build up a skilled base rapidly. Incentives for obtaining high end grants in terms of extra remuneration, travel grant from the college to attend international seminars, workshop should be provided. Rigid Quality Standards, and Accreditation of testing and calibration laboratories, according to international requirements, should be set up, as it will give an enhanced push to convince industries about the quality of work undertaken by academia

INDUSTRY AND SCIENTIFIC R&D

Bhavan's College must make every effort to achieve synergy between industry and scientific research. Autonomous Technology Transfer Organizations for various streams in the line of Bhavan's Research Centre (BRC) should be created as associate organizations of college to facilitate transfer of the know-how generated to industry. Increased encouragement should be given, and flexible mechanisms should be evolved to help, scientists and technologists to transfer the know-how generated by them to the industry and be a partner in receiving the financial returns. Industry should be vigorously sought to financially adopt or support educational and research institutions, fund courses of interest to them, create professional chairs etc. to help direct S&T endeavors towards tangible industrial goals.



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INDIGENOUS RESOURCES AND TRADITIONAL KNOWLEDGE

Indigenous knowledge, based on our long and rich tradition, should be developed and harnessed for the purpose of wealth and employment generation. Innovative systems to document, protect, evaluate and to learn from India's rich heritage of traditional knowledge of the natural resources of land, water and bio-diversity should be the motto of research from Bhavan's college. Development of technologies that add value to India's indigenous resources and which provide holistic and optimal solutions that are suited to Indian social-cultural-economic ethos should be developed.

GENERATION AND MANAGEMENT OF INTELLECTUAL PROPERTY (IPR Policy)

Intellectual Property Rights (IPR), must be viewed, not as a self-contained and distinct domain of staff, but rather as an effective instrument that would be relevant to the college. Thus, just filing of patent without having an industrial partnership and industry understanding for taking up of the technology will have no meaning and filing of patent just for name should be discouraged. The development of skills and competence to manage IPR and leveraging its influence can be given thrust.

The staff or the students working under them before filing the patent where College name or its resources are involved, should take a written permission from the principal with a copy of it sent to Convenor, Research and Development Cell. The staff or the student should discuss about the commercial value of that patent with the Research and Development Cell and should amicably reach to solution regarding the fair sharing of the profit amongst the stake holders and the college.

INTERNATIONAL SCIENCE AND TECHNOLOGY COOPERATION

Scientific research and technology development can benefit greatly by international cooperation and collaboration. Common goals can be effectively addressed by pooling both material and intellectual resources. International collaborative programmes, especially those contributing directly to our scientific development should be encouraged between academic institutions and national laboratories in India and their counterparts in all parts of the world, including participation in mega science projects as equal partners.

MONITORING

Effective, expeditious, transparent and science-based monitoring and reviewing mechanisms should be in place. In this context the "Bhavan's College Research Monitoring Committee" should



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be strengthened to ensure representation of all the departments with powers and responsibility of smooth and speedy implementation.

The research students will mandatorily submit the six-monthly report to the RCMC committee through the Research supervisor/Guide. It will be the responsibility of the student to attach all the six-monthly report at the time of submission of the thesis to the University of Mumbai.

Policy Document for PhD Admissions

All the department heads will submit to the Convenor of the committee the following

- a. Number of sanctioned PhD seats for their dept
- b. Number of PhD seats vacant (Kindly note vacancy is only considered after the submission of the thesis to the university by a previously registered student and not after submission of synopsis)
- c. Name of the recognised research guides of their dept
- d. List of candidate who have applied for PhD with PET with NET/SET/GATE clearance

2. Rules for PhD admission in our college

Sr no	Scheme of events	Timeline	Session
1	Prepare subject wise list of vacancy of PhD seat and send to thesis section	November May	Jan –Feb July-Aug
2	PET exemption is given to NET/SET/GATE/JRF qualified M.Phil degree holders 5yrs experience approved full time UG /PG teachers		
3	List of vacancy should go on university website and a notification goes in newspaper And on our college website also	10 th Dec	10 th June
4	Applicants contacting the staff for PhD are sent to thesis section for registration for PET with 1000/- demand draft (Rs 500/- for SC/ST) Separate list of M.Sc appearing students desirous of obtaining PhD	Within 21 days of notification	Within 21 days of notification
5	List of exempted students prepare subject wise and send to thesis section	Within 15 days of notification	Within 15 days of notification



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6	PET exam	2 nd sat of Jan/Feb Thesis session	2 nd sat of july/aug
7	PET result (50% passing, 45% for SC/ST) Validity 3 years	Within 25 days Declared on website	Within 25 days
8	Successful candidates will apply with DD of Rs 100/- to college in a Univ prescribed format	Within 15 days of result declaration	Within 15 days of result declaration
9	With 10 days notice period call for interviews must be sent and list displayed on notice board		
10	Interview to be conducted Quorum will be Principal , 2 subject expert , HOD, Research guide , 1 SC/ST reader grade approved faculty	Within 30 days of date of declaration of result	Within 30 days of date of declaration of result Within 30 days of date of declaration of result
11	Allocation of research guide	Will be done as per deptal policy , number of seats sanctioned to the dept by the univ and topic of interest	
12	Submission of research proposal to RR committee for approval		
13	RRC approved candidates will then submit applications for PhD registration to Univ College fees is waived for SC/ST candidates		
14	6 months course work mandatory	Details awaited from univ	

Research Student Redressal Mechanism-

- The research student in event of any problem with the research supervisor/ Guide should make an application to the principal and a copy of the same should be send to RCMC committee, giving plausible reason for the request for the guide.
- If the RCMC committee under the chairmanship of Principal finds the reason given by the research student acceptable, then the student may be given the option to change the research supervisor/ Guide.
- If the student complains about harassment by the Guide/Supervisor regarding the submission of the thesis, then the Research & Development Cell under the guidance of Principal (Chairman) can take suo-moto cognizance and do the needful.



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- The grievances of female Ph.D. students either from male or female supervisor will be taken on priority basis for effective redressal.

The research students can write to the principal and copy addressed to the RCMC committee, in case of any foreseen contingency, which will be taken on priority to address it.

SUBMITTING PROPOSAL FOR FINANCIAL GRANT IN AID

All the department heads will submit to the Convenor of the science committee the following

- list of working instruments available within their dept , their make, year of purchase, purchased with funds received from donation/ college/UGC, /granting body etc
- Names of staff member who wish to apply for grants for their research proposal in academic year.
- We propose to release a complied version of all our publications (oral, poster and full papers published in journals) attained within the academic year. Staff are requested to mail their full paper manuscripts soft copy/hard copy and abstract of poster to the RCMC convenor email id rcmc@bhavans.ac.in
- Science faculty ----- Dr B.M. Gore
- Arts Faculty ----- Dr Sunil Gondhali
- Commerce faculty ---- Mrs Janvi Bhatia

College Policy Document for Submitting Proposal for Financial grant in aid

- Funding bodies are available for major projects that initiate from 10 lakhs upto 30 lakhs or more from DBT, DST, UGC , New Delhi, BRNS , ICMR, ICAR
- Most of these projects are sanctioned to approved confirmed teachers. Preference is given to projects that have inter institution collaboration (at least in the initial first project)
- Projects that are funded should be well thought out ones that will lead to conclusive findings
- They must be planned for three years and must be in the format asked by the funding body



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**MONITORING OF THE PROPOSAL BY THE COMMITTEE WILL BE AS FOLLOWS
FOR ACADEMIC TECHNICALITIES**

Sr No	Particulars	Approved by PI	Approved by Co- PI	Approved by R&M committee	Remarks
1	Academic soundness and feasibility of work				
2	Time scale involved in implementation				
3	Availability of manpower JRF/SRF				
4	Qualifications of JRF as per the govt requirements NET/SET/GATE				
5	Last date of submission of proposal				
6	Extent of preliminary work done				
7	Objectives wrt to the following to be achieved first year – poster presentation at national conference second year - paper presentation at a national/international conference in India third year - publication of a full paper in an impacted journal Due recognition and incentive for such a publication must be given				
8	Yearly report preparation and presentation to granting bodies review committee responsibility must be specified between PI and co-PI				
9	A year end progress report of the work done must be submitted to the committee and if possible presented to the staff members interested				



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FOR FINANCIAL TECHNICALITIES

Sr No	Particulars	Approved by PI	Approved by Co- PI	Approved by R&M committee	Remarks
1	Distribution of the amount asked as per appendix 1				
2	Submission of doc for the overhead amount to the college authorities to be used as per preformed the dept/college policy				
3	Redundancy of instruments asked in proposal wrt its availability within other depts				
4	3 Quotations and specifications of the equipment attached with the proposal				
5	Quote for equipment must include the cost of octroi, custom duty, clearance agent charges				
6	Availability of doc regarding college PAN, TAN No , Bank account No, BVB registration certificate , inclusion in section 2f and 12 list (UGC) custom duty exemption doc (univ) etc				
7	Creation of FD in Indian bank for a period specified for generation of interest to be used as additional grant in aid amount				
8	Voucher for the expenditure needs to be signed by PI followed by principal /convenor (?) and must carry the rubber stamp of the granting agency and project No.				
9	Xerox copies of all the bills and vouchers must be kept with the PI though original needs to be submitted to accounts				
10	A separate ledger book pertaining to the accounts in each sub heads needs to be maintained by the PI DO NOTE use of amount specified under one subhead for				



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	another subhead is strictly not allowed				
11	Every year a utilization certificate, statement of expenditure, manpower certificate etc duly signed by auditor needs to be submitted without which release of next phase grant is not possible. THIS NEEDS TO BE EXPEDIATED AND SENT LATEST BY 1 st . WEEK OF MAY				

FOR ADMINISTRATIVE TECHNICALITIES

Sr No	Particulars	Approved by PI	Approved by Co- PI	Approved by R&M committee	Remarks
1	Interview panel for selection of JRF				
2	TA /DA for presentation of proposal to granting body before actual approval of grant				
	The accounts staff should keep the bills for grants received in separate files both in the tally software and as hard copies				



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Appendix 1- The fellowship paid by the different funding agencies will be governed by their respective policy documents which will be published from time to time.

Costing format for R & D Projects

	DBT	DST	UGC	BRNS	ICMR	Industry Project
Instruments	As per the project					
Books	No	No	Yes	No	No	No
Consumables	As per the project this includes glassware					
JRF/SRF/RA/PS	JRF (NET qualified) - 31,000 SRF (2 yrs exp) 35000	JRF (NET qualified) - 31,000 SRF (2 yrs exp) 35000	JRF (NET qualified) - 31,000 SRF (2 yrs exp) 35000	JRF – 25000/- SRF- 28,000/-	JRF (NET qualified) - 31,000 SRF (2 yrs exp) 35000	Salary per day/working hours allocated to project
Contingency	10% of project cost- JRF cost					NA
Travel	National/International DBT 10,000/yr for national travel					NA
Overheads	15% of project cost- JRF cost					20% of project cost inclusive of travel
Communication charges	NA	NA	NA	NA	NA	10%
Professional charges	NA	NA	NA	NA	NA	15%
Service tax	NA	NA	NA	NA	NA	10.35

Note- The above table is just indicative and should not be considered as final. Candidates will have to confirm themselves about the amount of fellowship from the respective funding agencies.

The RCMC committee under the Chairmanship of the Principal reserves the right to take certain measures for the benefit of the research student, staff and the College administration, so that the research is not hampered at any point of time.

Prof (Dr) Nitin M. Labhane (PhD, PDF-Hungary)
Convenor,

Research & Development Cell,
Bhavan's College, Andheri

Prof (Dr) Z.P. Bhathena (PhD)
Principal,

Bhavan's College, Andheri



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**LIST OF SCIENCE RESEARCH GUIDES AT BHAVAN'S COLLEGE, ANDHERI &
THEIR RESEARCH DOMAIN**

S. NO	DEPARTMENT	NAME OF GUIDE & Email Address	AREA OF INTEREST
1	Botany	Dr. Asmita. S.Mestry asmita.mestry@bhavans.ac.in	1. Phytochemistry and Pharmacognosy 2. Anatomy
2	Botany	Prof (Dr) Nitin M. Labhane nitin.labhane@bhavans.ac.in	1. Plant Molecular Biology, 2. Molecular Embryology (Reproductive Biology) 3. Climate Change & Biodiversity
3	Chemistry	Dr Uttam Yadav druattammyadav@gmail.com	1. Study of Heterocyclic chemistry 2. Synthesis of Organic Reaction
4	Chemistry	Dr. Pravin U. Singare, pravin.singare@bhavans.ac.in	1. Polymer Chemistry, 2. Environmental Chemistry
5	Microbiology	Dr R C Patil rajesh.patil@bhavans.ac.in rcpatil68@gmail.com	1. Nanotechnology & 2. phytochemicals
6	Microbiology	Dr. S.V.Raut svrmicro@yahoo.co.in	1. Probiotic & 2. Agricultural microbiology
7	Microbiology	Prof (Dr) Z.P. Bhathena zarine.bhathena@bhavans.ac.in	1. Biofilms 2. Bacteriophage application 3. Carbohydrate research



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8	Zoology	Dr. B.M. Gore bmgore2000@yahoo.com	1. Fish Biology 2. Applied aspect of fish 3. Solid waste Management & soil rejuvenation
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Note- The arts department also have recognised research guides in the subject of English, Economics, Philosophy, Psychology etc. However, the allotment of the students in arts department is done by the University directly.

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