



# **RESEARCH & DEVELOPMENT POLICY**

Principal

Baba Farid College of Engineering & Technology
BATHINDA.



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### 1. INTRODUCTION

BFCET always strives to promote research in all the emerging areas and is committed to promote research activities to address global challenges and well-being of the society. To build on these aims, BFCET has exclusively established the Department of Research & Innovation to promote quality research and research infrastructure. This policy not only describes the various schemes and incentives for the faculty of BFCET but is also the torch bearer to establish the research ecosystem in the campus.

### 2. OBJECTIVES

The objective of this policy is to encourage the faculty to

- enhance the quality research and integrate research with education
- · develop and safeguard the technology and file the Intellectual Property generated in BFCET
- · enhance the funding through extramural grant from Government Agency and Industry through writing the research project
- · create and maintain of research infrastructure through funded projects
- · be resource person for their department and college

### 3. INCENTIVE FOR QUALITY RESEARCH

#### 3.1 RESEARCH PAPER

- 3.1.1 Incentive is only to Research Paper published in Science Citation Index (SCI), Social Science Citation Index (SSCI) and Arts & Humanities Citation Index (A&HCI) products of Thomson Reuter and accessed through Web of Science
  - I. SCI/SSCI/A&HCI Journals with impact factor 0.00-0.5: 1500/-
- SCI/SSCI/A&HCI Journals with impact factor 0.5-1: Rs 2000/-II.
- III. SCI/SSCI/A&HCI Journals with impact factor 1.1-2: Rs 3000/-
- IV. SCI/SSCI/A&HCI Journals with impact factor 2.1-3: Rs 4000/-
- SCI/SSCI/A&HCI Journals with impact factor 3.1-4: Rs 5000/-V.
- VI. SCI/SSCI/A&HCI Journals with impact factor 4.1-5: Rs 6000/-
- VII. SCI/SSCI/A&HCI Journals with impact factor more than 5: Rs 7500/-
  - 3.1.1.1 Faculty could avail the above said incentive under Research Paper category if
    - I. He/She is employee of BFCET
  - He/She is 1st/2nd/Corresponding Author or Supervisor/Co-Supervisor in the paper 11.
  - III. He/She must have mentioned the name of BFCET
  - IV. He/She has not availed registration grant from BFCET for the same paper Incentive/Increment will be dispersed to only one author of the paper
  - V. Incentive amount will be dispersed one time.

### 3.2 RESEARCH PROJECT

### 3.2.1 Incentive and Additional Advantage

3.2.1.1 PI/Co-PI who gets the Research Project Sanctioned by Government Agency, is liable for incentive of 1% will be dispersed to PI only in BFCET account

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- 3.2.1.2 Faculty could avail the above said incentive under Research Project category if
  - I. He/She is employee of BFCET
  - II. 1% incentive to PI will be dispersed in proportionate to the grant transferred into the account of BFCET

### 3.3 PATENTS

- 3.3.1 Incentive of Rs 5000/- for filing (1stpublication) of his/her technology in Patent Journal and Rs 20.000/- for granting of patent
- 3.3.2 Faculty could avail the above said incentive under Patent category if
  - I. 100% patent filing fee is borne by the BFCET.
- II. He/She is employee of BFCET
- III. Baba Farid College of Engineering & Technology, Bathinda must be the Applicant of patent
- IV. Maximum Two Faculty members will be considered for increment as per the recommendation of Princilncentive will be dispersed to only Leading Inventor
- V. Incentive/Increment will be considered only if publication of technology is through BFCET
- VI. Faculty has to abide with BFCET IPR Policy

### 3.4 OTHER IPRs (TRADEMARK, DESIGN REGISTRATION ETC.)

- 3.4.1 Incentive of Rs 10,000/- for granting of IPR such as (Design Registration, Design of Integrated Circuit and New Plant Variety Registration)
- 3.4.2 Faculty could avail the above said incentive under Other IPRs category if
  - 3.4.2.1 He/She is employee of BFCET
  - 3.4.2.2 Baba Farid College of Engineering & Technology, Bathinda must be the owner of IPR
  - 3.4.2.3 Faculty has to abide with BFCET IPR Policy

### 3.5 INCENTIVE FOR ACADEMIC AWARD

- 3.5.1 Incentive of Rs 1,000/- for being awarded by National Government Approved Society/Body and of Rs 2,000/- for being awarded by International Approved Society/Body
- 3.5.2 Faculty could avail the above said incentive if
  - 3.5.2.1 Award is purely academic/research in the nature (Best Teacher, Best Scientist, Best Paper etc)
  - 3.5.2.2 The incentive will be given max 02 times in the calendar year.
  - 3.5.2.3 The name of Baba Farid College of Engineering & Technology must be mentioned on the Certificate with the name of faculty in the award

### 4. FINANCIAL ASSISTANCE FOR RESEARCH PROJECT GRANT

The BFCET is running with the aim "Academic Excellence for Empowerment". BFCET is willing to create research-oriented faculty along with an industry-academic environment. With the same aspiration, BFCET is providing Research grants for in-house faculty under Financial Assistance for Research Project Grant Policy. Under this policy, there is a provision of providing financial assistance for young, regular & research-oriented faculty to research in their specific field. This Policy is supposed to support advanced knowledge and disseminate it.

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### 4.1 ELIGIBILITY:

- The faculty of BFCET can avail this financial grant if they fulfil the following eligibility criteria:
  - Regular Faculty of BFCET
  - Faculty members having Ph.D. Degree in their academic field Faculty having at least 2 years of experience in BFCET Or

Three or more than three Research Papers in SCI Journals.

- 4.1.2 Age of Researcher should less than 50 Years
- 4.1.3 Desirables from the faculty for submitting the Research Proposal
  - 4.1.3.1 Involve one more faculty of BFCET as a Co-PI
  - 4.1.3.2 Involve 3-5 students of BFCET with Project

### 4.2 CALL FOR PROPOSAL

Proposals will be called twice in the academic session that is in May and November

### 4.3 NATURE OF FINANCIAL ASSISTANCE:

- 4.3.1 The financial assistance provided for a research project will be up to Rs. 2.00 lacs.
  - 4.3.2 The Principal Investigator can utilize the grant for books & journals, equipment & software, fieldwork and travel, Consumables (Chemicals and glassware), and contingency. The PI has to give an undertaking that equipment, books and Journals required for completion of the Project are not available in BFCET
  - 4.3.3 Any item purchased under the project will be the property of the college and PI has to submit it in the College library/Department/Store after the completion of the project.
  - 4.3.4 Any equipment purchased under the project should be kept in the College Campus
  - The breakup of grant proposal is as under
    - Equipment & Software (60%)
    - Fieldwork and travel (10%)
    - Books & Journals, Consumable such as Chemicals, glassware, etc. (25%)
    - Contingency (5%)

### 4.4 PRE-EVALUATION:

Intially, Research proposals will be put forwarded to the Selection Committee which will have the following members:

- Principal of College (Chairperson of Committee) I.
- Π. The Head of the respective department
- Ш. At least one Subject Expert (External Expert).
- IV. Senior faculty member of department

Selection Committee will meet twice in the academic session that is in the month of June and December

#### 4.5 TENURE:

The tenure of the project will be for one and half years (18 months). The effective date of implementation of the project will be given by the BFCET in approval-cum-sanction letter.

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### 4.6 PERFORMANCE MONITORING AND EVALUATION:

- 4.6.1 The principal investigator has to submit a half-yearly progress report, which should include the technical details about the progress of the ongoing project in a scientific way. It should also include all the details of expenditures performed in the past six months. This report will be examined by the subject expert of the evaluation committee. If the Principal investigator fails to send the report or the report sent is not satisfactory, the committee may discontinue the project funding.
- 4.6.2 Institute can also demand the quarterly report from PI
- 4.6.3 Mid-term monitoring and evaluation meeting for ongoing projects will be organized half-yearly. The Evaluation Committee will decide the continuance of the project on the recommendations of the Mid-Term Evaluation Committee. If Principal Investigator (or co-investigator) fails to attend (or present progress report) mid-term review meetings, the Committee may discontinue/ cancel the project.
- 4.6.4 After the completion of a project, PI will prepare a complete closing report including project outcomes and audit of the finance, and present to the Evaluation Committee for final assessment.

### 4.7 PROCEDURE FOR RELEASE OF GRANT

- 4.7.1 The first installment i.e. 70% of the total grant will be released after the recommendations of the Selection Committee and final approval of BOG.
- 4.7.2 In special case, if more than 70% of the grant is required before the 1st half- yearly Evaluation Committee meeting, then it will be subjected to the recommendation of the Selection Committee and final approval of BOG
- 4.7.3 The grant for the Research Proposal will be released in the College Account
- 4.7.4 The second instalment i.e. 20% of the total grant will only be released after receiving of half-yearly progress report, statement of expenditure and utilization certificate of 1stinstallment of grant.
- 4.7.5 The third instalment i.e. 10% of the total grant will be released on receipt of the following documents:
  - 4.7.5.1 Final report of the project along with a soft copy.
  - 4.7.5.2 A consolidated itemwise detailed statement of expenditure incurred during the complete project period in the prescribed proforma duly signed by the Principal and the Principal Investigator
  - 4.7.5.3 A consolidated Utilization Certificate for the amount utilized towards the project duly signed by Chartered Accountant, Principal and Principal Investigator in the prescribed proforma.
  - 4.7.5.4 Research Project proposal which has to be submitted to Government Agency for further funding
  - 4.7.5.5 The Principal Investigator is to settle the accounts within one month on completion of the project.
  - 4.7.5.6 All the procurement related to the project will be executed as per BFCET Rules and Regulation

### 4.8 GUIDELINES FOR FORMULATING PROPOSALS:

- 4.8.1 Orient your Research objective to a few specific outputs, which could be possible in 18 months.
- 4.8.2 While writing the proposal, please ensure that scientific and technical details are spelled out.
- 4.8.3 The proposal should have specific, concrete, quantifiable objectives and hypothesis.
- 4.8.4 The proposal should be based on innovative technologies/ ideas. Major programs of extension based on proven technologies are not considered.
- 4.8.5 Results of ongoing and completed projects of the principal investigator must be reflected in the formulation of a new proposal.

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## 4.9 DOCUMENTS/ENCLOSURES REQUIRED WITH THE PROPOSAL:

4.9.1 Proposal properly forwarded through the Head of Department and Principal of College

4.9.2 Details of Budget

4.9.3 Complete Biodata of the PI & Co-PI

### 4.10 EXPECTED OUTCOMES

While bestowing the grant BFCET expects from PI that his/her research should generate quantitative outcomes as well as provide some value to society. Technology development and publication will be the evidence of success of the Project. But following are the minimum expectation required before submitting the final report

- I. PI should submit the Research Project to Government Agency for further funding within one month of the submission of the Project.
- II. At least 2 Research Papers published in SCI/Scopus Indexed Journals.

### 4.11 NOTE:

4.11.1 The publication should be from the Research Project

4.11.2 PI must be as the first author in the publication

4.11.3 While submitting the research paper name of the college in which PI is

4.11.4 Working must be mentioned in the address/affiliation.

4.11.5 The PI should properly acknowledge the BFCET wherever he/she publish or present the research

4.11.6 A faculty member cannot avail of the grant from BFCET for the same proposal

4.11.7 Faculty cannot apply for another project before the completion of the Research Project faculty cannot apply for another project

# 5. <u>FINANCIAL ASSISTANCE TO PRESENT RESEARCH PAPER IN INTERNATIONAL CONFERENCE OUT OF INDIA</u>

5.1 Rs. 50,000/- or 50% of TA/DA and registration whichever is less will be given to the faculty member ONCE IN 3 YEARS who will be going for paper presentation in the international conference held abroad.

### 5.2 Eligibility

- 5.2.1 Financial assistance may be given to those faculty members who have completed three years of services at BFCET.
- 5.2.2 In case any faculty member has not completed three years & wishes to avail this facility, this financial assistance may be given to him/her as a loan and all the formalities should be completed, required for loan. Till the time he/she complete his/her three years at BFCET, he/she should be liable to pay the loan amount proportionately and after three years full amount (as per policy that is Rs. 50,000/- or 50% of TA/DA and registration whichever is less) shall be waived off.

### 5.3 Guidelines

5.3.1 The financial assistance will be given to the faculty member of Baba Farid College of Engineering & Technology, Bathinda (BFCET)

5.3.2 Faculty member would have to take prior approval from college Principal to attend the conference abroad

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- 5.3.3 Grant will be released after producing the Certificate, Photographs of Conference (Presenting the Paper) and Brochure of Conference
- 5.3.4 The name Baba Farid College of Engineering & Technology must be mentioned on the Certificate and Paper/Abstract with the name of faculty who had presented the paper
- 5.3.5 Faculty member not have availed registration grant from BFCET for the same paper
- 5.3.6 Financial Assistance will be given to only one author of the paper for the Oral Paper Presentation
- 5.3.7 Financial Assistance will be given once in the three years.

# 6. <u>FINANCIAL ASSISTANCE TO PRESENT RESEARCH PAPER IN NATIONAL/INTERNATIONAL CONFERENCE IN INDIA/ TO ATTEND CONFERENCE/SHORT TERM COURSE/ REFRESHER COURSE /ANY FACULTY DEVELOPMENT PROGRAMME / WORKSHOP</u>

**6.1** Financial Assistance for presentation of Research paper is Rs. 5000/- or 50% of TA/DA and registration whichever is less will be paid TWICE IN A CALENDER YEAR to the faculty member for presenting a research paper/ for attending Conference/ Short Term Course/ Refresher Course/ Faculty Development Programme / Workshop.

### 6.2 Eligibility

6.2.1 Faculty member should be full time teaching faculty of BFCET.

### 6.3 Guidelines

- 6.3.1 The financial assistance will be given to the faculty member of Baba Farid College of Engineering & Technology (BFCET)
- 6.3.2 The name of Baba Farid College of Engineering & Technology must be mentioned on the Certificate/ Paper/Abstract with the name of faculty who had attend the above said event.
- 6.3.3 Any Faculty member must not had availed the grant from BFCET for the same event
- 6.3.4 Financial Assistance will be given to only one author of the paper for the Oral Paper Presentation

### 7. FINANCIAL ASSISTANCE FOR PUBLICATION IN UGC APPROVED LIST OF JOURNALS

7.1 Financial Assistance for Publication of Research paper in UGC APPROVED LIST OF JOURNALS is Rs. 1500/- or 50% of cost for publication of papers whichever is less will be paid ONCE IN A CALENDER YEAR to the faculty member.

### 7.2 Eligibility

7.2.1 Faculty member should be full time teaching faculty of BFCET.

### 7.3 Guidelines

- 7.3.1 The financial assistance will be given to the Faculty member of Baba Farid College of Engineering & Technology (BFCET)
- 7.3.2 The name of Baba Farid College of Engineering & Technology must be mentioned on the Paper with the name of faculty
- 7.3.3 Any Faculty member must not had availed the grant from BFCET for the same paper
- 7.3.4 Financial Assistance will be given to only one author of the paper
- 7.3.5 Financial Assistance will be given twice in a years.

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### 8. FINANCIAL ASSISTANCE FOR MEMBERSHIP IN THE ACADEMIC SOCIETY

8.1 Financial assistance of Rs. 1500/- or 50% will be provided to faculty member towards the membership fees of the registered society/body whichever is less

### 8.2 Guidelines

- 8.2.1 The membership of those societies/bodies will be considered for grant which is directly related to the field/department/research of the respective faculty
- 8.2.2 The grant will be given one time in the calendar year.

### 9. POLICY FOR RESEARCH FACULTY

Research is the backbone of Higher Education Institution, so to promote Research in the BFCET, it has been envisaged that each Department of BFCET should have 1-2 Research Faculty. Faculty member having proven record of research in his specific domain will be considered as the Research Faculty. If the departments already have such type of faculty, then Head of Department should recommend his/her name for the Research Faculty to the Principal and if not, fresh recruitment should be done in the department. These faculty members along with Head of Department will contribute to develop the Research ecosystem in the Department

### 9.1 Eligibility

- 9.1.1. BFCET Faculty who holds Ph.D. degree
- 9.1.2 Three or more than three Research Papers in SCI Journals
- 9.1.3 Preferably handled a Research Project in his/her career

Appointment of these faculty will be done through proper documentation and will be total prerogative of HoD and Principal whom they appoint

### 9.2 Benefits

- 9.2.1 The workload of these faculty members can be reduced to 25%-50% than the actual workload allocated to other faculty members
- 9.2.2 The annual amount of Rs 10,000/- should be provided to the Research Faculty as a contingency for:
  - 9.2.2.1 The purchase of books
  - 9.2.2.2 Subscription of Journal/software
  - 9.2.2.3 Equipment

### 9.3 Responsibilities

- 9.3.1 Research faculty should have to publish atleast two Research Paper in the SCI Journals (In case of Science and Engineering Programmes);
- 9.3.2 Apply at least one Research Project in the Government Granting Institute
- 9.3.3 To look after the Live Projects of the Department and ensure their quality so that Intellectual Property (IP) could be generated from it.

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# ACADEMIT DOCUMENTS

### BABA FARID COLLEGE OF ENGG. & TECHNOLOGY

### 10. DEPARTMENT MENTOR

BFCET is striving the heights of excellence in the academics but still we are lagging behind in research, technology generation and commercialization. So to enhance the culture of quality- research and innovation in BFCET campus and down-the-line into the department, the Department Mentor could be the great source of information. Department Mentor should be highly qualified and Research Scientist/faculty from the reputed university in the specific field of Department. Department Mentor could be excellent source to uplift the Research and Innovation in the department.

### 10.1 Eligibility

- 10.1.1 Associate Professor/Professor from the reputed University or Institute of National Importance (IITs/NITs etc.)
- 10.1.2 High Quality of Research Background
- 10.1.3 Department Mentor should be in the core field of the Department

### 10.2 No. of Interactions

- 10.2.1 2 interactions in a semester
- 10.2.2 1 could be through online Mode

### 10.3 Honorarium and TA/DA

- 10.3.1 Rs 10,000/- as an honorarium per semester
- 10.3.2 For the Visit to campus TA: Rs 10 per Km + Toll

### 10.4 Responsibilities of Mentor Faculty

- 10.4.1 To suggest various granting institutes where Research Projects could be submitted
- 10.4.2 Assist in finalizing the Live Project and Certificate Course of the Department
- 10.4.3 New Pathways in Research

### 11. AMENDMENTS & PERIODIC REVIEW

The policy is subject to periodical review and amendments. It will be the responsibility of the faculty member to update themselves from time to time regarding amendments in policy and procedures.

### AFFILIATION TO BE USED IN THE RESEARCH PAPER

| Name of the College                   | Name of Department                   |  |
|---------------------------------------|--------------------------------------|--|
| 1 2                                   | Department of Mechanical Engineering |  |
|                                       | Department of Civil Engineering      |  |
| Baba Farid College of Engineering and | Department of Computer Science       |  |
| Technology                            | Engineering                          |  |
|                                       | Department of Electrical Engineering |  |
| 5                                     | Department of Applied Science        |  |