1. Vision and Mission Statement

Vision:

To promote research in order to strengthen and expand the research activities in the institute.

Mission:

- To conduct research on social, economic, human resource and environmental problems facing by the state, nation and world.
- To provide a system in the institute to plan, develop and conduct social research on problems of interest to the scientific community.
- To provide a mechanism whereby existing research capabilities in the institute can be matched with funding sources.
- To contribute to the institute's graduate and undergraduate program by involving students in research projects.

2. Research & Development outlook

Since its very inception, Bharati Vidyapeeth's College of Engineering, Kolhapur has been striving to develop itself into an institution of excellence in education and research in consonance with the contemporary and future needs of India through meaningful education, original research of the highest standard and leadership in technological innovation for the industrial growth of the Country. With the path-breaking innovations in both its curriculum and research, the Institute is rapidly gaining a legendary reputation.

In addition to offering formal Undergraduate and Post-graduate Programs, the Institute actively encourages its faculty to undertake sponsored research and consultancy projects in order to strengthen the research profile of the Institute.

The projects are very important for maintaining external and global linkages. The external/ industrial projects are useful to students to understand working cultural of industry and real time problems of industry.

3. Institute Research and Development Committee

Committee of Research & Development is set up to provide specialized for the operation of sponsored research, consultancy and other R&D related activities of the Institute.

The scope and scale of research has substantially evolved from the era of student thesis to funded projects to interdisciplinary research programs at National levels.

The Research and Development Committee interaction with external agencies/industries through Industry Institute Interaction Cell for R&D work. It also promotes externally funded research and development projects as well as patents. The Research and Development Committee acts as a bridge between the Institute and funding agency to undertake sponsored projects.

The college research committee is also follows:-

Sr. No	Name of Faculty	Department	Designation
1.	Dr. Pawar Sanjay S	Electronics &Telecommunication Engineering	In Charge
2.	Mr. Mane Vivek	Civil Engineering	Member
3.	Mr. Mandlik Vinay S.	Electronics &Telecommunication Engineering	Member
4.	Dr. Mirajkar Rahul P.	Computer Science and Engineering	Member
5.	Mr. Kulkarni Mahesh S.	Mechanical Engineering	Member
6.	Mr. Patil Ananda S.	General Science Engineering	Member

4. Research Paper Publication:

Faculties are promoted to write or publish their research work in standard journals with following norms to be followed

1. Faculties should publish their research only in peer reviewed, UGC care listed and Scopus indexed journals.
2. Affiliation of Bharati Vidyapeeth's College of Engineering, Kolhapur is compulsory for publication for institute employee.

3. Faculty pursuing Ph.D from other institute or university, dual affiliation should be used while submitting research publication.

4. Funding sources if any should be acknowledged in research publication.

5. It is recommended to faculty to use common structured format for name of author in all his publication for e.g Mr. Sanjay Shamrao Pawar

6. Incentives for paper publication will be provide as per circular from Bharati Vidyapeeth Bavan Ref. No. BV/CO/Admn/ 9207 /2022-2023 Dated: 02/09/2022

5. Research and Development projects:

The Institute's R&D activity aims at innovation and technological development through academic and research collaborations with industries to meet the immediate as well as futuristic needs of the society and industry. The scope and scale of research has substantially evolved from the era of student theses to funded projects to interdisciplinary research programs.

The Institute faculty, research staff and students conduct research with goals and objectives ranging from intellectual curiosity, addressing contemporary challenges, developing technology, or writing scholarly publications. Institute has facilitated a healthy ambience for research – both in terms of state-of-the-art infrastructure and scholastics.

The goal of our Institute is to encourage and cultivate an environment to carry out fundamental as well as applied research activities in the professional fields. Accordingly, the members take initiative to work on local, regional, national and global challenges.

The goal extents to find amicable solutions to mitigate them by using efficient techniques.

- **Research Idea:** As a Principal Investigator (PI), you should take into account your professional interest in identifying new and important research questions. Organization of brainstorming with a group helps in terms of idea mapping. Moreover, identifying ideas that are innovative in which you will be comfortable

requires refinement of your reach idea in terms of its implementation within the availability of scarce resources. One could establish an internal review panel as a team to discuss the efficacy of the proposed project.

- **Funding Agency:** One needs to learn about the funding agency in terms of its mission, research priorities, available financial resources, recent awards and current announcements. Faculty should initiate interaction with the programme manager and seek required information on matching of the research Idea and objectives of the agency. Faculty should visit the funding agency, if necessary and volunteer to serve on the review panel. Faculty needs to read and analyze the solicitation of the grant application.

- **Proposal Description:**

1. *Title:* It is the summary of the proposed study. It shall be a good match to the proposed themes of the funding agency. Moreover, it should be easily remembered by the reader cum reviewer.

2. *Summary of the Proposal:* One needs to highlight the aims and overview of the research plan. It should demonstrate the importance of the study and generate interest to the reviewer.

3. *Research Statement:* Faculty should incorporate the relevance of the proposed study, the focus of the study and a rational plan to achieve the study goal(s).

4. *Objectives:* The proposal should establish the overall direction of the proposed study. In the case of several objectives faculty should state the action, the behavior and the standard against which it will be measured.

5. *Literature Review:* Faculty needs to incorporate important work in a concise manner in the proposed study. In addition, faculty should try to advance the knowledge.

6. *Study Design:* It shall be simple and clear. Moreover, the design should be based on the study objectives. You may need to discuss with the expert in research methods, if necessary, to obtain suggestions on sample design, data measurement, collection and analysis.

7. *Ethics/ IPRs:* Funding agencies are concerned with ethical issues of the scientific experimentation on humans, animals, etc. PIs are responsible for upholding academic integrity.

8. *Research budget and term:* It consists of direct and indirect costs of the proposed study. Moreover, provide rationale for each budget item within the lines of the objectives of the study. It is advisable to seek assistance from the concerned staff of the Institute. It is necessary to check your calculations before you submit it to the funding agency.

9. *Benefits to the academia and the society:* The proposed study should contribute to the knowledge base and find solutions to the society's problems. The relevant design and finding of the study should be disseminated to the targeted groups of the society. The information sharing strategy could be worked out in consultation with stakeholders. The funding agencies provide incentives to the PIs to share the findings of the study.

A.   Type of Research Projects (By Faculty and Research Staff)

a. Sponsored Research Projects

For a project sponsored by agency, no honorarium in any form can be claimed. Amount may be used by the PIs as approved in the respective budget head by the funding agency.

- **Individual projects**

The Institute encourages investigation of basic and applied areas of science and technology, high end technology development in the form of sponsored projects. Research grants for such projects are given by agencies and industries. These projects are usually of one year or two year duration.

- **Collaborative projects**

Faculty may also participate in collaborative projects with other partners. In such projects, even though there may be an overall project, there must be a separate budget and scope of work statement to be done by the faculty and staff of the Institute. The summary statement provided to the Institute should be based primarily on the portion to be done by the Institute. The Institute will treat this like any other sponsored project.

The Institute soon after receiving the sanction letter from the Sponsoring Agency allows the Project Investigators to initiate the project work by duly hiring the personnel, spending on consumables, using the infrastructure and resources of the Institute, in anticipation of the release of the Funds.

The money received through Grants is parked in the Current Account held by the Institute and the Institute does not earn any interest on the Grants received. Neither the Institute charges any interest from the Funding agencies in case of delay in reimbursement of expenditure or transfer of the Funds pledged by the agency towards the execution of the Projects.

- **Guiding notes:**

- Project responsibility: These projects are headed by a Principal Investigator (PI), and may have Co-Principal Investigators (co-PIs)/administrative PI (to operate the project, in case PI is out of station) and the deliverables are the responsibility of the PIs.
- For each sponsored project, the entire expenditure for the operation of the project is required to be met out of funds provided by the sponsoring agency. The responsibility for operation of the project lies with the PI.
- Preparation and Submission of the Proposal: The project proposal should be formulated according to the format prescribed by the concerned funding Agency. The format is available at the respective website of each Funding Agency.
- While making an estimate of the funds required for a project, the following budget heads should be taken into account:

  a) Salary of Project Staff
  b) Equipment
  c) Consumables
  d) Travel
  e) Contingency
  f) Overheads (@ 25% of project cost)

- Endorsement is printed on the Principal's letterhead, and is signed by the PI.
- A proposal that satisfies all the conditions, particularly of the overheads, will be forwarded by the R&D committee.
- The Office will make a suitable record of the proposal, and then courier the project proposal to the concerned agency along with the Institute's cover letter. Alternatively, it may be given to the PI for forwarding it to the agency.
- The softcopy of the proposal will be sent to the Office of records.
- IPR issue: All IPR related issues are agreed between the Institute and the funding agency.
- MoU/Agreement preparation: The Institute can sign MoU/Agreement with funding agency.
- After completion of the project, final report should be submitted to the funding agency.
- A completion certificate should be obtained from the funding agency for successful completion of the project based on which project account will be closed.

b. Consultancy Projects

The Institute has expertise in various research areas to provide knowledge and intellectual inputs which are of interest to the industry. It encourages its faculty to undertake consultancy work which is an important tool in industrial growth of the Country.

Guiding notes:
- A consultancy project is one, where faculty and research staff provides intellectual knowledge to industry, primarily for their purposes. This is effectively a contract work in which all outputs belong to the sponsor.
- It is desirable that payments for consultancy be routed through the Institute. This means, that whenever payments are done, they should come in the name of the Institute, which will then do the needful for complying with statutory laws and then give the honorarium to the faculty/staff.

- The requirement originates from the industry concerned. The faculty is expected to estimate the time and cost required to complete the task.

- Preparation and Submission of the proposal: In case of a consultancy project, normally based on the requirement, proposal is prepared by the PI. It should specifically mention breakage of funds, normally consultancy fee as the primary component. It may also have budget for supporting manpower, equipment, travel contingency and other such costs to execute the consultancy project.

- Overheads and service tax: Service tax is subject to periodic revision by the Government of India is applicable.

- A MoU/agreement that satisfies all the conditions, particularly of the overheads, service tax will be approved by the Institute.

- The softcopy of the proposal will be sent to the Office for records.

- IPR issue: All IPR related issues are agreed between the Institute and the funding agency.

- MoU/ agreement preparation: The Institute can sign MoU/Agreement with consultancy agency.

- Project responsibility: These projects are headed by a Principal Investigator (PI), and the deliverables are the responsibility of the PIs. The Institute provides the PIs necessary support.

- After completion of the project, final report should be submitted to the funding agency.

- A completion certificate should be obtained from the funding agency for successful completion of the project based on which project account will be closed.

c. Testing Projects:

The word refers to examining a component or a product against a standard. Examples could be testing the strength of concrete in a construction, calibration of electronics equipment's etc. Testing is commonly accomplished in laboratories and does not require elaborate preparation.

Guiding notes:

- The procedure for overall operation of the project is similar like that of consultancy project.
- A MoU/agreement that satisfies all the conditions, the service tax will be approved immediately.
- The Office will make a suitable record of the proposal, and then courier the project proposal to the concerned agency along with the Institute's cover letter. Alternatively, it may be given to the PI for forwarding it to the agency.
- The softcopy of the proposal will be sent to the Office of records.
- After deduction of service tax, the balance receipt of testing is distributed as per institute policy.

Certification:

The Institute (through its faculty) is *not authorized to undertake certification* in any form. At best, one can say that, on a given day, with a given sample, a well-defined test yielded the following results.

d. Special grants

Sometimes, there are special grants given to the Institute for purposes like grants for infrastructure improvement, laboratory improvement, conference (from DST/CSIR etc.), donations (e.g. alumni), etc.

Guiding note:

- Such grants may be treated as a project for operational reasons. For such projects, the Institute overheads may be reduced or waived.

e. Travel grants

Travel support is given by funding agency for specific travel support. All travel expenditures are paid out of this account.

f. Committee for purchase of Research Equipment

Major equipment in the areas of research is the main focus. Proposals for purchase of major research equipment are invited.

Guiding notes:

• Submission of the Proposal: The proposals need to be submitted.
• The proposals need to be duly forwarded by the concerned Head(s) of the Departments. The lead Department is expected to contribute significantly to the infrastructural support required, such as space and manpower, for the equipment to be purchased.
• It is understood that the head of the department will ensure providing fair access to all the participating users or any new user in the institute, identified later, without any discrimination, failing which the facility may be transferred to another department in the institute or alternate coordinator may be assigned. After the proposal gets accepted there will be purchase of equipment.

B. Students' Projects:

Students are generally encouraged to collaborate and assisted by the faculty members and the designated research professionals to carry out any research project. Normally, students work on the idea developed by the faculty or academic staff funded by the external agency. The results of the project are documented in the form of publications, IPRs. Sometimes, external agencies fund the project where students are allowed to participate in terms of ideas; they get opportunity to gain guidance from experts to further work in the area.

a. Work Experience & Research

It gives students the freedom and opportunities to work upon their own ideas in diverse areas that have a bearing on the existing industrial and national problems. It offers a database of experts, accessibility to institute resources, and basic skill-building projects (including lecture series, workshops, visiting trips).

b. Sponsored Final Year Projects

Students of every department are encouraged to take industry sponsored project under the guidance of faculty allocated in final year. The faculty and students needs to discuss the requirement with sponsoring industry and terms mentioned in curriculum. The detail of sponsorship in terms of amount/technical guidance/material sponsorship needs to be clearly mentioned in sponsorship letter. If agreed in terms of sponsorship the project needs to be implemented and completion certificate needs to achieve for sponsoring agency. A copy of project report needs to be submitted to sponsoring industry and Institute.

6. Center for Development of Technical Education

In order to improve awareness as well as to provide exposure in diverse areas of Engineering and Technology, the faculty and academic staff of the Institute offers themselves as resource persons held at institute level and other institutes. The institute provides finance for organizing workshops at institute level and provides duty leave for faculty resource person if the workshop is at other venue. The Institute aims to encourage such courses at the high end to contribute to skill development in the working professionals.

- **Organizing Conferences/ symposium/ workshops**

Conferences/ symposium/ workshops are an important part of academic and research world. The Institute provides support for organizing conferences, which help in building the brand image of the Institute. The Institute encourages the use of its facilities for conferences.

Guiding notes:

- For organizing any self financing courses, workshops, conferences, seminars, request has to be routed through Head of department.
- Organization of Conferences/ symposium/ workshops rests entirely with the Organization department – the Institute is only a facilitator.
- Details of Expenses need to clear with account department of institute within one month of conduction of event.

7. Filing and Management of Patents

The Institute's scope and scale of pursuing research has substantially evolved to include collaborative projects, technology mission, technology transfer and IPR.

IPRs are generated by the faculty while working in the Institute on projects. The Institute should try to keep its rights intact as far as possible. Sharing of IPRs is decided by negotiations with the funding agency and on case to case basis.

These IPRs are generated by faculty/staff/students individually or in collaboration, for the purposes of any revenues will be treated as property of the Institute. The Institute will, on a case-by-case basis, get into an agreement with the creator(s) of the IPR, regarding the sharing of revenues that may accrue by selling/leasing/granting rights/etc. of such IPR.

08. Contract/Agreements

The Institute's research philosophy has progressed from inter-departmental collaboration, to industry partnerships. The Institute needs to sign several Memoranda of Understanding/contracts/agreements with other institutions and industries to strengthen its collaborative research efforts either for carrying research, The objectives of these MoUs are promoting, strengthening, maintaining scientific and academic co-operation, exchange of faculty, students, staff, technology transfer, sharing of intellectual property for the purposes of engineering research, and educational programs, sharing scientific instruments of common interest.

While getting into these research/academic agreements with agencies, laboratories, organizations, and companies, the document that is prepared needs to be couched in the right language. It carries legal weightage and can be very important under certain circumstances.

09. Institute's policy on Overheads and Service Tax

I.   Background:

i)   Project cost refers to the expense incurred by the PI for the duration of the project. It includes equipment, salaries, travel, consumables, and contingency.

ii)   Overheads refer to the payment due to the Institute from the grant approved by the funding agency-organization-industry.

iii)   Sponsored project refers to one in which the PI carries out research. Such projects generally do not have a provision for payment of honorarium.

iv)   Consultancy project utilize prior skill and competence of the PI. They allow the PI to charge honoraria.

v)   Testing refers to a very limited duration activity involving a calculation or a measurement.

vi)   Service tax is required to be paid for all consultancy and testing projects.

II.   Calculation of overheads:

1. **SPONSORED RESEARCH:** Proposals submitted for sponsored research must show overheads of 25% on the project cost.
   a. When money is received from the funding agency, overheads as approved would be deducted.

2. **CONSULTANCY:** At the stage of proposal submission, the budget will reflect project costs, overheads and service tax. Service tax is subject to periodic revision by the Government of India.

   a. When money is received from the funding agency in a lump sum, the following procedure will be followed. At the first instance, **Service tax** is deducted. The balance funds are credited into the project account as per the budgetary allocations of the project.

b. Service tax will be deposited in a suitable account in accordance with the rules of Government of India.

c. Service tax on equipment is waived if the funding agency-organization reclaims it at the end of the project, which should be the part of the proposal.

3. **COURSES:** For short-term courses, conferences, workshops, and symposia, the total receipts (registration as well as grants) will be transferred to the account of the Institute.

4. **TESTING:** After deduction of service tax, the balance receipt of testing is distributed as per: 35% Institute and 65 % distribution (among participating employees).

5. **DISTRIBUTION:** The policy on sharing the income generated through consultancy and project is as follows

    The consultancy works may be categorized into three types:

Category A: Consultancy works involving testing the materials/items using laboratory equipment and machines.

Category B: Consultancy works using faculty expertise for analysis, design and programming.

Category C: Consultancy works using high quality software's available in the college.

The Consultancy amounts received will be disbursed in accordance with the breakup policy once in 6 months / 12 months, preferably during 1st week of January/July every year.

Details of breakup for consultancy are given in table

Sr.	Members/ Items	Category A	Category B	Category C
1	Principal	05	05	05
2	Dean, R & D and consultancy	02	02	02
3	HOD	05	05	05
4	Staff involved i) Faculty ii) Technical & Non-technical iii) Programmers / Computer	30 15 -	45 - -	45 - -
5	College	20	20	20
6	Expenses in preparing the reports and others Actual subjected to a maximum off	18	20	18
7	Depreciation	02	02	02
8	Maintaining the records, typing covering letters, dispatch etc. i) Jr. Assistant/Operator ii) Attendant / Helper	02 01	02 01	02 01
	Total	**100**	**100**	**100**

10. Personal Bank Account

Personal Bank account is created for individual faculty, research staff on request soon after his/her joining.

Credits in the Personal Bank Account

The following may be credited into the Personal Bank Account:

1. Overheads of sponsored projects.
2. Contributions from GATE, MBA, and other similar examinations of the Institute.
3. Full or portion of the balance amount of consultancy projects.

The amount can be utilized for the following purposes:

1. Purchase of equipment;
2. Travel for research or related discussion;
3. Conference related payment;
4. Purchase of Books, Professional Membership;
5. Teaching material and teaching aids;
6. Expenses related to promotion of professional activities;
7. Any other expenditure as permitted from the consultancy account except honorarium payment;

All purchases shall be made following the Institute Purchase Rules for projects. No honorarium can be drawn from this account.

11. Writing Books

The rich outcome of the research endeavors can be seen in the large number of books. The strong academic environment in the campus encourages faculty members to write books in the area of their expertise.

Following the practices across the world, books authored by faculty or research staff are not treated as projects or consultancies. Hence, any royalties received for books authored by faculty members are not within the purview of the Institute – they need not be reported to the Institute.

12.Intellectual Property Rights

Intellectual property of any kind created by faculty, students, staff, project staff, and others, such as trainees from other institutes, participating in institute programs or using funds or facilities, is owned by Institute when either of the following applies:

a) The intellectual property was created with the significant use of funds or facilities administered by Institute.
b) The intellectual property was created as a part of the normal professional duty.
c) The intellectual property was created in the course of or pursuant to a sponsored/consultancy research agreement with Institute.
d) The intellectual property was created as a part of academic research and training leading towards a degree or otherwise.

All copyrights, including copyrighted software will be owned by Institute when it is created as a part of any of the academic programs of Institute or created pursuant to a written agreement with Institute, providing for transfer of copyright or ownership to Institute. More specifically:

a) Institute will be the owner of the copyright on all teaching materials created by Institute. However, the authors will have the right to use the material for their teaching and research activities.

b) Institute will not claim ownership of copyright on books and scientific articles authored by personnel. However, Institute will have the copyright if books and reports have been created using funds specifically provided for this purpose.

Inventor/Author Ownership

Inventors/Authors will own intellectual property when

a) None of the situation defined above for ownership of intellectual property applies.
b) It is created outside their area of research/teaching without the use of significant institute resources.

Students will own copyright on theses/dissertation created as a part of their academic programmes. However, the student must grant to institute royalty-free permission to reproduce and distribute copies for teaching and research as well as for dissemination for teaching and research to other academic institutions.

Ownership of software code, patentable subject matter and other intellectual property contained in the theses/reports are subject to conditions specified under institute ownership and Inventor/Author ownership.

Contracts and Agreements

All agreements related to IP undertaken by any faculty personnel and students need to be approved by the institute:

Commercialization

1. Institute shall market the IP and identify potential licensee(s) for the IP to which it has ownership and for which rights have been assigned to it.
2. If Institute not able to commercialize the IP in a reasonable time then the inventor(s) may approach for assignment of rights of the invention(s) to them.

Patent filing charges:

Institute shall contribute the total filing, prosecution and maintenance expenses for securing IPR in India.

.

Publications:

For any academic institute, publications of papers are crucial for their very existence. support 50% of publication fees is provided to researcher.

Confidentiality:

It is important to realize that confidentiality pertains to the researcher or consultant and his/her group, but not the Institute as a whole.

Dispute resolution:

Hopefully, this situation does not arise at all. Yet, it needs to be drafted carefully and the PI alerted to its implications.

Payment terms:

Release of payment must be clearly stated. Usual norms are the following:

Deliverables:

In a well-drafted agreement, the task-definition should be clear and precise

Ownership of property:

Institute will be the owner of equipment (and software) purchased out of the contract, until and unless provided otherwise in the contract.

Penalty clause:

Such a clause is not acceptable. In other words, no penalty will be given by Institute for non-performance or delay in performance during the course of the project.

Security deposit:

No security deposit will be paid by the Institute to start a project.

Coordinator:

Name of the coordinator/Project investigator must be mentioned on the first page of the MOU.

13. Functions of R&D Cell

Research & Development was set up to provide support for the operation of sponsored research, consultancy and other related R&D activities of the Institute. It facilitates interaction with external agencies. The key role of R&D is to provide a creative atmosphere in research and development activities of the Institute.

➢ To make the institute as a Research Centre of affiliating University / Other Organizations.

➢ To address the issues of research and suggest recommendations with their impact.

➢ To provide adequate infrastructure and support in terms of technology and information needs.

➢ To improve on Research publications of staff and student.

➢ To create awareness among the students and faculty on the culture of research and aptitude.

➢ To obtain information once in six months in the prescribed format on faculty involvement on guiding students, paper publications, research projects from external funding agencies and involving in collaborative research activity.

➢ To conduct / participate in workshops, training program and sensitization programmes on capacity building in terms of research and consultancy and imbibing research culture among staff and students.

➢ To arrange guest lecturers under Institute-Industry-Interaction programmes to promote research on industry needs.

➢ To Modernize the existing laboratories with additional experimental set ups/ instruments and technology for utilizing the labs for research activity.

➢ To provide facility to the faculty in the form of academic leaves for improving their qualification and quality of research.

➢ To provide budget for in-house R & D projects mentioning the guidelines and targets to achieve the expected outcome of the projects proposed.

➢ To Sponsor faculty and students to present papers at National /International conferences as per the stipulated guidelines mentioned in the Quality Document of the institute.

➢ To motivate staff and students for research activities.

14. Annual Report

Annual report is the report that contains information about faculty publications, student publications, research project carried out, workshop/seminars arranged and patents filed.